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TRANSACTIONS

OF THE

STATE AGRICULTURAL SOCIETY

OF

MICHIGAN:

WITH REPORTS OF

COUNTY AGRICULTURAL SOCIETIES,

FOR THE YEAR 1857.

PUBLISHED BY ORDER OF THE LEGISLATURE.

VOL. IX.

LANSING:
Hosmer & Kerr, Printers to the State.
1859.

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NINTH ANNUAL REPORT

OF THE

MICHIGAN STATE AGRICULTURAL SOCIETY,

1857.

OFFICE OF THE MICHIGAN STATE AGRICULTURAL SOCIETY,
Detroit, January 1, 1859.

To the HON. N. G. ISBELL,
Secretary of State:

SIR:—In accordance with the law, and the directions of the Executive Committee of the State Agricultural Society, I herewith transmit to you the Ninth Annual Report of the Michigan State Agricultural Society.

Very respectfully,
R. F. JOHNSTONE,
Secretary.

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NAMES OF THE EX-PRESIDENTS

OF THE

MICHIGAN STATE AGRICULTURAL SOCIETY.

EPAPHRODITUS RANSOM, KALAMAZOO,.....1849.

EPAPHRODITUS RANSOM, KALAMAZOO,.....1850.

EPAPHRODITUS RANSOM, KALAMAZOO,.....1851.

JAMES B. HUNT, PONTIAC,.....1852.

JOSEPH R. WILLIAMS, CONSTANTINE, ...1853.

GEO. C. MUNRO, JONESVILLE, ...1854.

A. Y. MOORE, SCHOOLCRAFT,.....1855.

M. SHOEMAKER, JACKSON, ...1856.

JAMES BAYLEY, TROY, ...1857.

CHAS. DICKEY, MARSHALL,.....1858.

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LIST OF OFFICERS OF THE SOCIETY FOR 1858.

President—CHARLES DICKEY, Marshall, Calhoun County.
Treasurer—BENJAMIN FOLLETT, Ypsilanti, Washtenaw Co.
Secretary—J. P. C. EMMONS, Detroit, Wayne County.
R. F. JOHNSTONE, " " "

EXECUTIVE COMMITTEE.

Members whose terms expire on the 31st of Dec., 1858.

Name.	*Post Office.*	*County.*
J. S. Tibbits,	Plymouth,	Wayne.
J. J. Newell,	Adrian,	Lenawee.
C. W. Green,	Farmington,	Oakland.
Wm. Canfield,	Mt. Clemens,	Macomb.
Archibald Jewell,	Dowagiac,	Cass.
H. G. Wells,	Kalamazoo,	Kalamazoo.

Members whose terms expire on the 31st of Dec., 1859.

Name.	*Post Office.*	*County.*
A. N. Hart,	Lapeer,	Lapeer.
J. B. Crippen,	Coldwater,	Branch.
W. H. Montgomery,	Ida,	Monroe.
J. H. Richardson,	Worth,	Tuscola.
E. N. Wilcox,	Detroit,	Wayne.
Horace Welch,	Ypsilanti,	Washtenaw.

VICE PRESIDENTS.

Name.	*Post Office.*	*County.*
J. R. Kellogg,	Allegan,	Allegan.
John Bowne,	Barry Centre,	Barry.
T. O. Woodruff,	Niles,	Berrien.
Elijah Leland,	Quincy,	Branch.

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Name.	*Post Office.*	*County.*
Chas. D. Gorham,	Marshall,	Calhoun.
Justus Gage,	Dowagiac,	Cass.
Samuel Ashmun,	Sault St. Marie,	Chippewa.
John Swegles,	St. Johns,	Clinton.
Reuben Fitzgerald,	Bellevue,	Eaton.
——— ———	———	Emmett.
James Seymour,	Flushing,	Genesee.
Moulton Craw,	Grand Traverse,	Grand Traverse.
H. H. Sherman,	Jonesville,	Hillsdale.
David Cush,	Ontonagon,	Houghton.
——— ———	———	Huron.
D. Felt,	Bunker Hill,	Ingham.
Cyrus Lovell,	Ionia,	Ionia.
Austin Blair,	Jackson,	Jackson.
C. A. Jeffries,	Isabella Centre,	Isabella.
O. C. Tyrell,	Kalamazoo,	Kalamazoo.
Truman H. Lyon,	Grand Rapids,	Kent.
Phineas White,	Lapeer,	Lapeer.
B. J. Bidwell,	Tecumseh,	Lenawee.
H. H. Norton,	Howell,	Livingston.
J. P. King,	Mackinaw,	Mackinaw.
R. P. Stone,	Roseville,	Macomb.
G. H. Sherman,	Monroe,	Monroe.
John L. Moss,	Greenville,	Montcalm.
Henry Ashmun,	Saginaw City,	Midland.
——— ———	———	Newaygo.
Chas. Baldwin,	Rochester,	Oakland.
Abner Sherman,	Ontonagon,	Ontonagon.
Henry Pennoyer,	Grand Haven,	Ottawa.
W. L. P. Little,	Saginaw,	Saginaw.
John Divine,	Lexington,	Sanilac.
Luke Parsons,	Corunna,	Shiawassee.
J. E. Ritter,	St. Clair,	St. Clair.
Chas. L. Miller,	Colon,	St. Joseph.
Richard Beach,	Tuscola,	Tuscola.
Philotus P. Hayden,	Paw Paw,	Van Buren.

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Name.	*Post Office.*	*County.*
T. S. Finley,	Ypsilanti,	Washtenaw.
Silas Sly,	Plymouth,	Wayne.

CORRESPONDING SECRETARIES.

Name.	*Post Office.*	*County.*
R. B. Wightman,	Hastings,	Barry.
R. W. Landon,	Niles,	Berrien.
E. H. Lawrence,	Marshall,	Calhoun.
Daniel Blackman,	Cassapolis,	Cass.
J. C. Brunson,	St. Johns,	Clinton.
J. M. Morris,	Charlotte,	Eaton.
F. H. Rankin,	Flint,	Genesee.
F. M. Holloway,	Hillsdale,	Hillsdale.
P. Low,	Mason,	Ingham.
J. H. Hubbell,	Jackson,	Jackson.
A. Y. Moore,	Kalamazoo,	Kalamazoo.
E. E. Ball,	Grand Rapids,	Kent.
Andrew Howell,	Adrian,	Lenawee.
E. F. Burt,	Howell,	Livingston.
C. F. Mallory,	Romeo,	Macomb.
E. G. Morton,	Monroe,	Monroe.
H. E. Light,	Greenville,	Montcalm.
J. R. Bowman,	Pontiac,	Oakland.
Benjamin Smith,	Eastmanville,	Ottawa.
P. S. Lyman,	Corunna,	Shiawassee.
Edgar White,	St. Clair,	St. Clair.
Harvey Cady,	Centreville,	St. Joseph.
O. H. P. Sheldon,	Paw Paw,	Van Buren.
L. Davis,	Ann Arbor,	Washtenaw.

There are a number of counties omitted, viz: Allegan, Chippewa, Emmett, Grand Traverse, Houghton, Huron, Ionia, Isabella, Lapeer, Mackinaw, Midland, Newaygo, Ontonagon, Saginaw, Sanilac and Tuscola, in which there is as yet no County Societies, or from which no report has been received, to show who was Secretary.

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THE STATE LAWS

RELATIVE TO

THE ENCOURAGEMENT OF AGRICULTURE.

[From the Compiled Laws of the State, page 536.]

AN ACT to incorporate the Michigan State Agricultural Society. Approved March 31, 1849.

Section 1. *Be it enacted by the Senate and House of Representatives of the State of Michigan*, That all persons who now are, or may hereafter become associated for the purposes of this Act, are hereby constituted a body corporate, by the name of "The Michigan State Agricultural Society," for the purpose of promoting the improvement of Agriculture and its kindred arts.

Sec. 2. For the purposes aforesaid, the Society shall possess the general powers and privileges, and be subject to the general liabilities contained in chapter fifty-five, title ten, of the Revised Statutes of eighteen hundred and forty-six, so far as the same may be applicable and have not been modified or repealed; but the real or persona estates which the said Society shall be authorized to take, hold and convey, over and above its library, and its scientific and agricultural collections, shall not, at any time, exceed in amount the value of twenty thousand dollars.

Sec. 3. It shall be the duty of the Michigan State Agricultural Society to transmit to the President of the Senate, for the use of the Legislature, in the month of January, *annually*, a report and statement of its proceedings, specifying the nature of the encouragement proposed by it, and the object for which, and persons to whom, premiums have been awarded; embracing also such accurate details of the modes of cultivation, of keeping stock, and of other important incidents, as will acquaint farmers and others with the precise manner in which the valu-

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able results recorded can be again obtained; and presenting such other matter as the Society may judge most useful in promoting a greater and more general progress in practical agriculture.

Sec. 4. This act shall take effect immediately.

AN ACT in aid of the Michigan State Agricultural Society, Approved April 7, 1851.

Section 2. It shall be the duty of such officers of the Michigan State Agricultural Society, as it may elect for that purpose, annually to regulate and award premiums on such articles, productions and improvements, as they may deem best calculated to promote the agricultural and household manufactory interests of the State, having special reference to the most economical or profitable mode of competition in raising the crop or stock, or in the fabrication of the article offered: *Provided always*, that before any premium shall be delivered, the person claiming the same, or to whom the same shall be awarded, shall deliver to the President of the Society, in writing, an accurate statement and description, verified in such manner as the officers aforesaid may direct, of the character of the soil, and the process of preparing it, including the quality of manure applied in raising the crop, or the kind and quantity of feed in feeding the animal, as the case may be; also the kind and cost of labor employed, and the total expense and total product of the crop, or the increase in value of the animal, with a view of showing accurately the resulting profit.

Sec. 3. This act shall take effect immediately.

AN ACT to provide for Publishing the Annual Report of the Michigan State Agricultural Society, Approved April 7, 1851.

Section 3. The Michigan State Agricultural Society shall transmit to the Secretary of State the Annual Report of said Society for the year eighteen hundred and fifty-one, and every second year thereafter, embracing the same kind of information as is required in the third section of an act entitled "An Act to incorporate the Michigan State Agricultural Society," approved March 31, 1849, any law to the contrary notwithstanding.

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AN ACT making an appropriation to aid the Michigan State Agricultural Society, and to provide for publishing the Annual Reports of said Society, Approved February 14, 1853.

Section. 2. That two thousand copies of the Annual Report of the Michigan State Agricultural Society be printed and bound annually, under the supervision of the Secretary of State, in the same manner and form as the Report of the Superintendent of Public Instruction for the year 1852; and when so completed, the Secretary of State shall reserve thirty copies for the use of the State Library, and shall deposit with the Auditor General one copy for each organized township in this State, to be sent by him to each township for the use of the library thereof; and the remaining copies shall be forwarded by the Secretary of State to the Secretary of the Michigan State Agricultural Society, for the use of said Society, under the control of the Executive Committee.

JOINT RESOLUTION relative to furnishing certain laws, journals and documents to the Michigan State Agricultural Society, for the use of a Library, Approved April 1, 1850.

Resolved, by the Senate and House of Representatives of the State of Michigan, That the following laws and documents be, and they are hereby donated to the Michigan State Agricultural Society, (if it can be done without reprint, or injury to the State Library,) to aid said Society in establishing an Agricultural Library, at such place and under such regulations as the Executive Committee thereof may prescribe, viz: One copy of the Revised Statutes of 1838 and 1846, one copy of the Session Laws, one copy of the joint documents and journals of the Senate and House of Representatives of each Legislature since, and including the year 1839, and also one copy of the Session Laws and documents of the present Legislature, and of each successive Legislature; and the Secretary of State is hereby authorized and required to transmit to the Recording Secretary of said Society the above named laws and documents as soon as practicable, who shall receive the same and place them in the Library aforesaid.

This joint resolution shall take effect, and be in force from and after its passage.

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LEGISLATIVE ENACTMENTS

RELATIVE TO

COUNTY AND TOWN AGRICULTURAL SOCIETIES.

AN ACT for the encouragement of Agriculture, Manufactures, and the Mechanic Arts, Approved March 16, 1849.

Section 1. In any county in this State, where the inhabitants thereof have organized and established, or may hereafter organize and establish a Society for the encouragement and advancement of Agriculture, Manufactures, and the Mechanic Arts; and shall raise from said Society, annually, the sum of one hundred dollars or over, for the promotion of the above objects, in said county; which fact shall be certified by the President and Secretary of the Society, under oath, and a certificate thereof shall be filed with the clerk of the Board of Supervisors; the Board of Supervisors of said county, at their annual session in each and every year, are hereby required to levy a tax of not less than one-fortieth, nor more than one-tenth of one mill on the dollar, on the assessment roll of the county; which tax shall be collected and paid to the Treasurer of the county, in the same manner that other taxes are collected and paid.

Sec. 2. The Treasurer of the county shall keep the sum so raised, subject to the order of the Board of Supervisors of said county.

Sec. 3. The said Board of Supervisors shall draw upon the said Treasurer for the sum so raised; and the same shall be expended, under the direction of said Board, for the benefit of said Society, in the purchase of premiums, the diffusion of valuable agricultural, manufacturing and mechanical knowledge, or in such other way as shall, in the opinion of the Board, be calculated to promote and encourage the important objects above specified.

Sec. 4. The act entitled, "An act for the encouragement of Agriculture," approved March 2, 1844, is hereby repealed.

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Sec. 5. Any citizen of any county in which a society of the kind above named, is or shall be organized, shall have a right to become a member thereof by complying with the rules and regulations of said society.

Sec. 6. This act shall take effect and be in force from and after its passage.

AN ACT to authorize the formation of County and Town Agricultural Societies, Approved February 12, 1855.

Section 1. *The people of the State of Michigan enact,* That any ten or more persons, inhabitants of this State, who shall desire to form a Town or County Agricultural or Horticultural Society, in any county, town, city or village of this State, may make, sign and acknowledge duplicate articles of association, before any officer authorized to take the acknowledgment of deeds in this State, and file the same in the office of the Secretary of the State Society, and also in the office of the County Clerk of the county in which the business of the Society is to be conducted; in which articles shall be stated the name by which such society shall be known in law, the particular business and object of such society, the number of Trustees, Directors and Managers, who shall manage the same, and the names of such Directors, Trustees or Managers thereof, for the first year of its existence.

Sec. 2. Upon filing such articles of association as aforesaid, the persons who shall have signed the same, and their associates and successors, shall thereupon, and by virtue of this act, become a body politic and corporate, by the name stated in such articles: *Provided,* No two societies shall assume the same name; and by that name they and their successors shall and may have succession, and shall be persons in law capable of suing and being sued; and they and their successors may have and use a common seal, and the same may alter and change at pleasure; and they and their successors, by their corporate name, shall in law be capable of taking and receiving, purchasing and holding real estate for the purpose of their incorporation, but for no other purpose, to an amount not exceeding the sum of twenty-five thousand dollars in value, if a county society, and ten thousand dollars, if a town, village or city society, and of personal estate for a like purpose, to an amount not exceeding ten thousand dollars, if a county society, and five thousand

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dollars if a town, village or city society; and may make all necessary by-laws for the management of said society, not inconsistent with the laws of this State, or of the United States.

Sec. 3. Any person who shall pay into the treasury of said Society annually, in such time and manner as the By-Laws thereof shall direct, a sum of money not less than fifty cents nor more than one dollar, and subscribe to the articles of association, shall be a stockholder therein, and entitled to all the privileges and immunities thereof.

Sec. 4. The officers of said Society shall consist of a President, a Secretary and Treasurer, and at least five Directors, and they shall be elected annually by the stockholders of said Society; and said officers shall constitute a Board for the management of the concerns of said Society, a majority whereof shall constitute a quorum; and it shall be the duty of said officers to manage the property and concerns of said Society as will best promote the interests of Agriculture, Horticulture and the Mechanic Arts; and they may hold fairs and exhibitions, and may distribute premiums for the best and most meritorious animals or articles exhibited in these several departments, as shall be by their By-Laws and regulations provided.

Sec. 5. There shall be but one County Society in any one county in this State, nor shall there be more than one Town Society in any any one town, village, or city, but two or more towns may join and organize a Town Society for such towns.

Sec. 6. The said Society may, in case the uses and conveniences thereof so require, upon application to the Circuit Court of the county where such Society is organized and located, obtain and have authority to sell, from time to time, the whole or any part of its real estate, the granting of such authority to be in the discretion of the Court, and such application to be made only when authorized by said Society, at an annual meeting thereof, by a vote of not less than two-thirds of the members of such Society, present at such meeting; and notice of the intention to vote for such application having been published in some newspaper published in said county, if there be one published; and if not, then in some newspaper published in an adjoining county, once a week for three months preceding such annual meeting.

Sec. 7. The stockholders of all corporations organized under this act shall be individually liable for all labor performed for such corporation or association.

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Sec. 8. The President, Secretary and Treasurer of said Society shall, on or before the twentieth day of December in each year, make out and transmit to the Secretary of the State Agricultural Society, at his office, a statement of the transactions of said Society for the preceding year, and giving a full detail of the receipts and expenditures thereof, with a list of the premiums awarded, and to whom, and for what purpose.

Sec. 9. This act shall be subject to the provisions of chapter fifty-five, title ten, of the Revised Statutes of eighteen hundred and forty-six, so far as applicable to associations formed under this act.

Sec. 10. This act shall take effect immediately.

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CONSTITUTION

OF THE

MICHIGAN STATE AGRICULTURAL SOCIETY,

(As Amended.)

Article 1. The name of this association shall be "The Michigan State Agricultural Society," and its object shall be to promote the improvement of agriculture and its kindred arts, throughout the State of Michigan.

Art. 2. The officers of this Society shall be a President, one Vice President in each organized county in the State, a Recording Secretary, and a Treasurer, and the Corresponding Secretary of each organized County Agricultural Society shall be the Corresponding Secretary of this Society for their County; and any county not having an organized County Agricultural Society, shall not be entitled to a Corresponding Secretary of the State Society; and an Executive Committee, consisting of the President and Recording Secretary, and twelve other members to be chosen for that purpose, and also the ex-Presidents of the Society. These officers shall be elected by a majority of the votes at the annual meeting of the Society, and shall, except the twelve members of the Executive Committee, hold their offices for one year, and until the annual meeting of the Executive Committee. The Executive Committee at their annual meeting in December, 1856, shall proceed to elect one-half of their number by ballot, to hold for two years, and the other six shall serve for only one year; and at the next annual meeting of the Society, and annually thereafter, six members of the Executive Committee shall be elected to hold for two years, and until the annual meeting of the Executive Committee: *Provided*, That the officers named upon the organization of the Society shall be deemed members, and shall remain officers only until others shall be duly elected at the

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first annual meeting; and if a vacancy happened, it may be filled by appointment of the Executive Committee.

Art. 3. The duties of the President, Vice President, Recording and Corresponding Secretaries, shall be such as usually pertain to their respective offices, and such also as may be prescribed by the order of the Executive Committee, as hereafter provided.

Art. 4. The Treasurer shall receive and keep an accurate account of all moneys belonging to the Society; he shall pay out its moneys only on the order of the Executive Committee, and at each annual meeting of the Society, he shall make a full report of its financial transactions and conditions.

Art. 5. The Executive Committee shall determine the place for holding each annual meeting and fair of the Society, and it shall call that meeting and fair at such time as it shall judge best, or between the first Monday in September and the third Monday in October, giving at least sixty days public notice thereof.

Art. 6. The Executive Committee shall direct the money appropriations of the Society, and have the control of its property; it shall make the necessary preparations for the annual fair, and issue all proper public notices and circulars in relation thereto, or to the general object of the Society; it shall prepare the necessary By-Laws of the Society, and may prescribe such duties to the other officers of the Society as are not inconsistent with the usual business of their respective offices; it shall itself obey the instructions which may be given to it at the annual meeting of the Society, and at the expiration of its term of service, shall make a full report of its proceedings. It shall be competent for the Executive Committee, or a majority of them, to appoint a Chairman and Secretary, who may transact all such business as they may be authorized to do by said committee; and said Secretary shall sign, and said Chairman shall countersign, all orders on the Treasurer for the payment of any money directed by said committee to be paid for any purpose, and said Secretary shall keep an accurate account of all orders so drawn.

Art. 7. It shall be the duty of the Executive Committee annually to regulate and award premiums on such articles, productions and improvements as they may deem best calculated to promote the agricultural and household manufacturing interests of the State, having special reference to the most economical or popular mode of competition

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in raising the crops or stock, or in the fabrication of the articles offered: *Provided always*, That before any premium shall be delivered, the person claiming the same, or to whom the same shall be awarded, shall deliver to the President of the Society, in writing, an accurate statement and description, verified in such manner as the Executive Committee may direct, of the character of the soil, and the process in preparing it, including the quality and quantity of the manure applied in raising the crop, or the kind and quality of food in feeding the animal, as the case may be; also the kind and cost of labor employed, and the total expense and total productions of the crop, or the increase of value of the animal, with a view of showing accurately the exact resulting profit.

Art. 8. The Executive Committee shall meet annually, at such place as it may itself choose, on or before the second Monday in January, and shall then immediately prepare a report and abstract of the transactions of the Society during the preceding year, embracing such valuable reports from committees, statements of experiments, cultivation and improvement, proceedings of County Societies, correspondence statistics, and other matters, the publication of which will exhibit the condition of the Agricultural interests of Michigan, and a diffused knowledge of which will, in the judgment of the committee, add to the productiveness of agricultural and household labor, and therefore promote the general prosperity of the State; and as soon as practicable the committee shall transmit such report and abstract to the President of the Senate for the use of the Legislature.

Art. 9. No officer of this Society, except the Recording Secretary, shall receive any compensation for his services. The Executive Committee shall allow said Secretary such sum for past and future services as they may deem advisable.

Art. 10. Any person may become a member of the Michigan State Agricultural Society, for one year, by paying one dollar into its treasury. Any officer of the Society may receive and forward to the Treasurer the fee requisite to a membership. By paying ten dollars into the treasury of the Society, any person may become a life member, and shall be entitled to a certificate of such membership, signed by the President and Recording Secretary.

Art. 11. The several County Agricultural Societies that now exist or may hereafter exist in this State, shall be deemed auxiliaries of the

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State Society, and it shall be the duty of the Executive Committee to invite and receive reports and abstracts of the County Societies, to be used in preparing the annual report to the Legislature, which is provided for by article eight of this Constitution.

Art. 12. The President and Recording Secretary of each County Agricultural Society, and all life members of this Society, may attend the annual meeting of the Executive Committee, and freely participate in all discussions which shall occur at such meeting.

Art. 13. This Constitution shall be altered only by a vote of two-thirds of the members present at an annual meeting of the Society.

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TRANSACTIONS

OF THE

MICHIGAN STATE AGRICULTURAL SOCIETY.

Proceedings of the Executive Committee, at its meeting held on the Fair Ground, September 29, 1857.

Present, James Bayley, President.

Messrs. Follett, Jewell, Crippen, Canfield, Newell, Tibbets and Welch.

On motion of Mr. Follett, the following appointments were made:

Mr. Welch, General Superintendent of the Grounds during the Fair.

Mr. Crippen, " " of the Cattle Department.

Mr. Dickey and Mr. Newell, General Superintendents of the Horses and their Exhibition.

Mr. Tibbets, General Superintendent of the Sheep, Swine and Poultry.

Mr. Canfield, " " of Mechanics' Hall.

Mr. Jewell, " " of Domestic Manufactures.

Mr. Backus, " " of Floral Hall.

Mr. Green, " " of Agricultural Implements and Machinery.

On motion of Mr. Welch,

Resolved, That the price of tickets for admission to the stand, shall be ten cents each.

Vacancies in the Viewing Committees were filled, and the several Committees proceeded to fulfill their duties.

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ANNUAL MEETING OF THE SOCIETY.

The annual meeting of the Society for the Election of Officers, and of other business, was held on the Fair ground, on Friday, the 2d of October, at 12 o'clock, M.

On motion of Mr. Follett,

Resolved, That the officers be elected by ballot.

Ballots being cast for President, Col. Chas. Dickey, of Marshall, was unanimously elected.

After several informal ballots for Secretary, a formal ballot was taken, and J. P. C. Emmons, of Detroit, received sixty-one votes, and J. R. Bowman, of Pontiac, received fifty votes.

On motion, it was

Resolved, That J. P. C. Emmons, of Detroit, be declared unanimously elected.

Benjamin Follett, of Ypsilanti, was elected Treasurer.

The following members of the Executive Committee were then chosen:

A. N. Hart, Lapeer, Lapeer county.

J. B. Crippen, Coldwater, Branch county.

W. H. Montgomery, Ida, Monroe county.

J. H. Richardson, Worth, Tuscola county.

E. N. Wilcox, Detroit, Wayne county.

Horace Welch, Ypsilanti, Washtenaw county.

Mr. Charles Dickey having resigned his place on the Executive Committee, Hezekiah G. Wells, of Kalamazoo, was selected to fill the vacancy.

On motion of J. B. Crippen,

Resolved, That the Constitution of the Michigan State Agricultural Society shall be so amended that its officers shall be elected by the

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members, at an annual meeting to be held on the second Wednesday of January, 1859, and on the same day in each year thereafter, at such place as may be deemed by its Executive Committee to be the most convenient for its members; and that thirty days' notice of said meeting shall be given by the Secretary of the Society, through the public journals.

On motion,

Resolved, That the said resolution be referred to a select committee.

The President appointed Messrs. Dickey, Jewell and Canfield, as the committee to which the said resolution should be referred.

On motion of Mr. Morton,

Resolved, That the thanks of the Society be tendered to the President for the faithful and impartial manner in which he has discharged the duties of his office.

On motion,

Resolved, That the thanks of the Society be tendered to J. C. Holmes, for his services as Secretary for the past ten years.

On motion,

Resolved, That the annual meeting of the Executive Committee be held at Detroit on the second Tuesday of January, 1858.

On motion, the Society then adjourned.

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ANNUAL MEETING OF THE EXECUTIVE COMMITTEE AT DETROIT, JAN. 12, 1858.

At twelve o'clock, noon, January 12, 1858, the Executive Committee met the office of the *Michigan Farmer*, pursuant to a resolution passed at the last meeting, and on motion adjourned till 2 o'clock P. M., at the Michigan Exchange.

Two o'clock P. M.

The President announced that there were present Messrs. Tibbits, Newell, Wells, Hart, Crippen, Montgomery, Welch and the Secretary, and that the Committee was ready to proceed to business.

The Secretary made a verbal report.

The Treasurer made a report, which was accepted, and is as follows:

REPORT OF THE TREASURER.

To the President and Executive Committee of the Michigan State Agricultural Society:

The Treasurer herewith submits his report for the year 1857.

The receipts have been as follows:

From Detroit subscriptions of 1856,	$105 00
do do of 1857,	1,066 85
From the Annual Fair of 1857,	3,013 15
From the State of Michigan,	2,000 00
	$6,185 00

The disbursements have been as follows:

Paid to H. H. Brown, late Society Treasurer,	$325 00
Paid to the present Treasurer balance of account due him at last report,	153 99

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Paid orders drawn by the Secretary for premiums
andother indebtedness of the Society,.....5,447 49

5,926 48

Balance now in the Treasury,..... $258 52

The accounts and vouchers are herewith submitted in detail. There is now due the Society from the State $2,000, which, when realized, with the amount now on hand, will nearly free the Society from debt, notwithstanding the great falling off in receipts at our annual fair.

There is also quite an amount due the Society from the Detroit subscriptions, a portion of which may be collected. The subscription for 1856 is in the hands of Messrs. Moore & Blackman, attorneys, who have paid me one hundred dollars thereon, and have commenced suits upon others.

BENJ. FOLLETT,
Treasurer.

YPSILANTI, Jan. 12th, 1858.

Mr. Tibbits offered the following resolution:

Resolved, That the next annual fair of the Michigan State Agricultural Society, be held at any city or village on the line of the Michigan Central Railroad from Detroit to Kalamazoo, where the greatest amount of money shall be raised and paid to the Treasurer of said Society on or before the first day of July, A. D. 1858.

Mr. Newell moved to amend the same by altering so that the city or village would be requested to tender grounds properly fitted for holding the said fair.

On motion, the resolution and amendment was laid on the table.

The President announced Messrs. Crippen, Newell and Hart as a Committee on Finance.

Messrs. Hart, Montgomery and Canfield as a Committee on Essays.

The system of keeping farm accounts, devised by Mr. Cochrane, being presented, Mr. Cochrane was invited to present his system to the Committee this evening.

Mr. Newell offered the following resolution:

Resolved, That the Secretary be directed not to draw any premium checks on the Treasurer until he is notified by the Treasurer that the $2,000 due the Society by the State has been paid in.

Adopted.

Adjourned till 7 o'clock P. M.

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Seven o'clock P. M., January 12, 1858.

The Committee met pursuant to adjournment.

The President announced the following committees:

On Field Crops—Messrs. Tibbits, Green and Welch.

On County Societies—Messrs. Montgomery, Newell and Tibbits.

On Rules and Regulations—Messrs. Canfield, Wells and Crippen.

Premium List—Messrs. Green, Welch, Newell, Tibbits and Wilcox.

Business Committee—Messrs. Wilcox, Wells, Green and Secretary.

Mr. Cochrane then appeared before the Committee, and explained his system of farm accounts; after which the subject was referred to a special committee consisting of Messrs. Wilcox, Hart and Canfield.

The Committee then adjourned till to-morrow morning, at 8½ o'clock A. M.

Wednesday, January 13, 1858.

Present, Messrs. Tibbets, Newell, Green, Canfield, Wells, Hart, Crippen, Montgomery, Wilcox, President Dickey, and Secretary J. P. C. Emmons.

The several committees appointed yesterday retired for the performance of the duties assigned them, and the Committee being without a quorum, adjourned till 2 o'clock, P. M.

Two o'clock, P. M.

Mr. Welch, Chairman of the Business Committee of 1857, presented the claim of Messrs. Holmes & Co., for $11 85, which was duly audited and allowed.

Mr. Dickey, from the special committee appointed at the annual meeting of the Society in 1857, to whom was referred a resolution proposing an amendment of the Constitution, by which the time and place of choosing the officers of the Society would be changed, made the following report:

The committee to whom was referred a certain resolution, introduced by Mr. Crippen, of Branch, at the Ninth Annual Meeting of the Michigan State Agricultural Society, October 3, 1857, in the city of Detroit, for an amendment of the Constitution, so that the election of the offi-

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cers of the Society shall be on the second Wednesday of January in each year, from and including the year 1859, would respectfully report, that after a careful examination of the organic acts of this and other States, and the workings of the different organizations, would recommend that the resolution be not adopted.

All of which is respectfully submitted.

CHAS. DICKEY, *Chairman.*

The report was accepted, and the recommendation adopted.

Mr. Crippen, from the Finance Committee, made the following report:

Your Committee on Finance, appointed to examine the financial condition of the Society, and to recommend such changes as to them may seem necessary, would respectfully report, that they have examined the accounts of the Treasurer herewith submitted, and find them correct. We find the receipts of the Society for the past year, as per his statement, from all sources, to have been $6,135 00; its disbursements to this time, to have been $5,926 48, leaving a balance in the treasury of $258 42, against which $193 35 outstanding warrants remain as yet unpaid.

We are unable to arrive at an exact conclusion, as to the oustanding obligations of the Society, except for the above amount of $193 35; but from the best data at our command, concluds they do not exceed sixty dollars.

The drafts on the Treasurer, amounting to $2,200 for the premiums awarded at the last State Fair, have not yet been issued to the several parties entitled to them, as that officer would be unable to pay them until he is in receipt of the appropriation made by the State for the year 1857.

Your committee have examined closely the character of the expenditures for the last year, and present a brief analysis of accounts, that you may the better be able to judge wherein retrenchment is practicable.

At the last meeting of the Executive Committee, the Committee on Finance submitted certain estimates of receipts and expenditures for the past year. These estimates have since proved incorrect in many particulars, although it must be admitted that the actual expenditures have fallen below the estimates as well as the receipts. The following are the most important items of expenditure:

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For Fair grounds,	$1,500 00
Incidental expenses on Fair gronnds,	156 82
Expenses and time of H. Welch for Business Committee,	261 30
Bills for printing,	376 85
Salary of Secretary for one year,	600 00
Extra services to January 12, 1858,	43 35
Expenses of Secretary's office for clerks, rent, stationery, &c.,	361 00
Feed bills,	382 04
Police force and assistants,	503 85

The Committee would recommend the adoption by its Secretary of a more perfect system of accounts with the Treasurer, so that the exact financial condition of the Society may be known at any time ; also that when any moneys are paid to the Treasurer from any source, vouchers for it shall be kept by the Secretary.

In view of the doubt which exists as to the location of the fair for this year, and the fact that a change of location might materially vary the expenses of the Society, we do not submit any estimate for the ensuing year.

After a review of the financial condition of the Society, we are pleased to report that we think its condition much better than at any previous period of our acquaintance with it ; in evidence of which we need only call your attention to the condition of the Society in past years; and which shows that at the time of the annual meeting, December 1855, the indebtedness was $3,018 46; on January 12, 1857, the indebtedness was $1,688 84; at the present time its whole indebtedness, including premiums awarded at the late fair, is about $2,400; and to pay which there is on hand the balance now in the hands of the Treasurer, and the State appropriation of $2,000, which is yet to be collected.

In view of the above highly favorable results in the past, we are led to hope that by economy and good management, the Society may become entirely free from debt, and thus be able to contribute more efficiently and more powerfully to the advance and improvement of the agriculture of the State.

All of which is respectfully submitted.

The report was accepted and ordered filed.

Mr. Newell offered a resolution requiring the subscriptions raised by

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cities or villages as inducements for holdidg the annual fair at any location, to be accompanied by a guaranty.

Laid on the table.

It was moved that the consideration of the location of the State fair be taken up in the session of this evening.

Mr. Wells moved that a first prize of $10 be confirmed to James Taylor, of Kalamazoo, for the best yoke of working oxen over four years old, exhibited at the State fair of 1857, the award having been made, but the report not being correcrly transcribed, there is no record on the premium list.

The motion was sustained, and the premium confirmed.

The Committee then took a recess until half past seven o'clock.

—

Half-past seven o'clock.

Mr. Montgomery offered the following resolution:

Resolved, That the Secretary be requested to invite Mr. Titus to meet the Executive Board, and report his doings in the sale of lumber of the Society, sold by him in 1854.

Mr. J. C. Holmes presented a draft of a memorial to Congress, praying for a grant of lands to State Agricultural Colleges, for the consideration of the Executive Committee.

On motion,

Resolved, That the members of the Executive Committee sign the same and that the Secretary be and he is hereby directed to forward copies of said memorial to the Senate and House of Representatives of the United States, at Washington.

By unanimous consent, Mr. Tibbetts withdrew a former resolution offered by him, and offered the following:

Resolved, That the next Annual Fair of the Michigan State Agricultural Society be held at the city or village on the line of the Michigan Central Railroad from Detroit to Kalamazoo, where the greatest inducements shall be offered to the Business Committee of said Society.

Mr. Canfield offered an amendment so that the resolution will read as follows:

Resolved, That the next Annual Fair of the Michigan State Agricultural Society be held at that city or village on the line of the Michi-

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gan Central Railroad from Detroit to Kalamazoo, where the greatest inducements shall be offered to the Business Committee of said Society, and that any considerations which may be offered shall be secured to the satisfaction of said Committee, to be paid on or before the first day of September, 1858.

The resolution as amended was adopted.

Mr. Crippen moved that the Annual Fair of the Society be held on the last week of September, 1858, commencing on Tuesday, and that it be held during Tuesday, Wednesday, Thursday and Friday of that week.

Mr. Tibbits moved to amend by altering the motion so that it will read on the Tuesday after the last Monday in September, and that the fair be held for four days. The amendment was adopted and the motion was passed.

Mr. Crippen, from the Committee to which was referred the resolution of a former meeting, relative to the presentation of a testimonial to J. C. Holmes, the late Secretary, reported that the Committee recommend that the Society pay to Mr. Holmes $35, to be by him invested in books, said sum to be paid whenever the present indebtedness of the Society shall have been liquidated. This report was adopted.

Mr. Wilcox offered the following resolution:

Resolved, As an expression of the views of the Executive Committee, that if the Business Committee receive satisfactory security for the payment of $1,000, by the citizens of Detroit, in addition to other inducements equal to those which may be offered by other places, the Business Committee shall be warranted in locating the next Fair at Detroit.

Mr. Green moved to amend by altering the amount to $1,500.

After some discussion, on motion of Mr. Crippen, the resolution and amendment was laid on the table, and the Committee adjourned.

Thursday, January 14, 1858.

The Committee met pursuant to adjournment.

The President submitted for consideration a letter from Gen. J. H. Richardson, of Tuscola, a member of the Executive Committee, which was read, as follows:

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Tuscola, January 12, 1858.

J. C. HOLMES, ESQ., *Secretary:*

Yours of December 13, came to hand some time since. I very much regret that I cannot meet your Committee at its present meeting; but my business is such that it will not permit my absence. I hope, however, for the good of the whole community, and for the benefit of our best horses, that there may be some action on the part of the Committee to have all stock and blood horses shown separate and backed up by their progeny. Exhibit them in families; let each horse's stock follow him on to the ground, not less than five in number, and as many more as may be. I think this subject very important, and that we should thus get our best stock at the exhibitions, and be able to compare the merits of the parents as stock getters. There is a great deal doing in this region of country in horses and cattle, and I mean to do what I can to get them out. * * * * * * * *

Yours, very respectfully,

J. H. RICHARDSON.

The Committee on Rules and Regulations made a report, and whilst considering the same,

Mr. Johnstone, of the *Michigan Farmer*, introduced Mr. Horace Greeley to the Committee. The President welcomed Mr. Greeley, and stated that the Committee would be pleased to hear his opinions on the success of the New York State Society, and its method or working.

Mr. Greeley responded by remarking that he had but a short time to stay, and that this introduction was entirely unexpected. He would, however, call the attention to two subjects. In respect to progress in agricultural education, Michigan was ahead of New York, or of any State in the Union, and New York could neither instruct nor enlighten the Peninsular State. So far as his observation had gone, he had come to the conclusion that the New York State Society had reaped all the benefits for agriculture that it could from a minute division of premiums. He thought that further progress was to be obtained only by the offering of larger premiums to induce a greater outlay and concentration of mental labor. For instance in the science of growing the best and largest crops from an acre, or from a quantity of acres, there was little more known, nor was there a better practice in vogue, than there was before the Society commenced operations. He meant in general use.

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He thought that large premiums offered for a series of operations, which would call out trials all over the State, would have a very beneficial effect. All would not win, but the very thought and action necessarily elicited by becoming a competitor, would operate to bring into use improved methods and practices, which would be adopted over large tracts, because they would prove profitable, and hence the benefits which would accrue from large premiums. He thought that the New York State Society was gradually tending in that direction.

The other subject to which he would call attention, was the necessity of a text book on agriculture, for use in common schools. We had texts on every science but this one, the most important of all. He thought that a portion of the funds of such a society, might very properly be devoted to encourage the production of a work which would make the children of the farmer familiar with the science of the various processes which were being carried on around them every day, and that thus the objects for such organizations as State Agricultural Societies were founded, would be most promoted.

Mr. Greeley, after a few minutes' conversation with the President, retired. The Committee again proceeded with the consideration of the report on Rules and Regulations, and then adjourned till 2 o'clock P. M.

Two o'clock, P. M.

The report of the Committee on Rules and Regulations, came up for final consideration, and was adopted.

Mr. Tibbits, from the Committee on Field Crops, made a report, which was adopted. This report is as follows:

The Committee on Field Crops respectfully report: that but three competitors have entered the list for awards on field crops: viz., Mr. R. R. Briggs, of Romeo, Macomb County, who competes for the premium on corn, potatoes and sugar beets; Mr. G. R. Hurd, of Monroe County, who competes for the premium on potatoes; and Mr. James Hutchinson, of Ypsilanti, who competes for the premium on corn.

The object of the Society in offering awards on "field crops," is to elicit valuable information as to improved modes of culture, so that the community at large may be benefitted by their experiments and discoveries. To this end they have required competitors to forward full state-

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ments "of the manner of cultivation, kind of soil, quantity of seed, when sowed or planted, when harvested," &c. In addition to this, the cost of raising and harvesting the crop should be added. The affidavit of the competitor is also required to this statement. No affidavit accompanies Mr. Briggs' statement; neither does it appear that any extra effort was made in growing the several crops, nor was the yield extraordinary. We therefore do not deem them worthy of any award. The statement of Mr. Hurd lacks accuracy of detail, but as the yield was considerably above the average, we award him a Diploma. The statemant of Mr. Hutchinson is more explicit, but still lacks the valuable information of the cost of raising and harvesting the crop, but as the yield may be considered extra, we award the second premium of six dollars.

This report was accepted and adopted.

The Treasurer made the following supplemental report:

To the President and Executive Committee of the Michigan State Agricultural Society:

The Treasurer begs leave to submit the following report—

The amount of money in the Treasury at the last report was,	$258 52
Since which I have paid vouchers,	221 35
Leaving balance in Treasury,	$37 17

B. FOLLETT, *Treasurer.*

Mr. Green, from the Committee on the Premium List, made a report which was accepted and referred to the Committee of the Whole for consideration. After going through the list, and making sundry amendments to the same, the report was adopted.

On motion, the portion of the premium list relating to essays, was referred to a committee consisting of Messrs. Newell, Canfield and Tibbits, with instructions to diminish the number of subjects upon which premiums should be offered to six.

On motion, the settlement with Mr. Jonas H. Titus, in relation to lumber turned over to him in the year 1854, was referred to a committee consisting of the President, Mr. Welch and the Secretary, to be by them disposed of as they may deem best for the interests of the Society.

Mr. Wilcox and Mr. Newell were appointed a special committee to report on the system of Book Keeping for Farm Accounts, invented by Mr. Cochran.

Adjourned till 7 o'clock.

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Seven o'clock, P. M.

Mr. Wilcox, from the above named committee, made the following report:

The Special Committee appointed to examine the system of Farm Accounts, presented by Mr. William D. Cochran, of Detroit, have the honor to report that they have examined the same, and heartily recommend it to the favorable consideration of the Executive Committee; they therefore report the following resolutions:

Resolved, That the Executive Committee of the Michigan State Agricultural Society recommend to the public the work of W. D. Cochran, of Detroit, entitled "Agricultural Book Keeping: being a Concise and Scientific System of Keeping Farm Accounts,"—together with the blank books and tables accompanying the same, as works of practical utility to the farmers of the country.

Resolved, That the Secretary be and is hereby authorized to present Mr. Cochran with a certified copy of the foregoing resolution.

Mr. Hart, from the Committee on Essays, made the following report, which was accepted:

Mr. President—Your Committee on Easays, beg leave to report, that they have had for consideration before them, but a limited number of articles, and those from the pens of two individuals only.

From Mr. Edward Mason we have—

1. An Essay on breeding and management of horses.
2. An Essay on breeding and management of horned cattle.
3. Essay on the culture of shade trees.

Your Committee need not advise you that the short time given them for the examination of the several productions before them render it impossible for them to bestow that attention which would be really desirable; but from the consideration which we have given the several articles, we find that Mr. Mason has collected many facts of importance to the stock growing interests of our State, in obtaining which great research has been necessary, and much labor required in arranging the same in the very acceptable manner in which they are presented to us. And your Committee recommend the award of the following premiums to Mr. Edward Mason: for the best Essay on breeding and managing horses, $15 00; for the best Essay on breeding and management of

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horned cattle, $15 00. For the Essay on shade trees, although not destitute of merit, we recommend no premium.

Your Committee have also before them one Essay on Domestic Economy, purporting to have emanated from Mrs. C. W. Green, of Farmington, Oakland county, which we think embodies many valuable suggestions—is highly creditable to the lady who furnished the article under our consideration; but your Committee are of opinion that the production is not of that high wrought and meritorious character which would authorize us in recommending it for the premium of $15. And therefore recommend the award of one set of silver tea spoons of the value of six dollars.

All which we respectfully submit, and ask to be discharged from the further consideration of the subject.

A. N. HART,
Chairman.

On motion, the said report was amended by striking out so much as relates to the awards for an essay on Domestic Economy, and the sum of $15 00 as offered in the printed premium list was inserted therein.

On motion of Mr. Crippen, it was resolved that the salary of the Secretary be fixed at $600 for the year 1858.

Mr. Newell, from the Committee on Premiums for Essays, reported that premiums on the following subjects should be offered: For the best essay on the cultivation of corn; on manures and their application; on the cultivation of the grape vine in this State; on swine; on the growth and production of hay; and on the cultivation of Sorghum and production of sugar therefrom.

Mr. Wells moved that so much of the above report as offered a premium for an essay on the Sorghum, be stricken out.

Mr. Hart moved to amend by striking out, in addition, all that part of the report that proposes an essay on swine.

The motion to amend was lost.

The question recurring on the motion to strike out so much as relates to the Sorghum, the motion was lost.

The report was then adopted.

The Committee then proceeded to appoint the following list of Viewing Committees for the Annual Exhibition of 1858:

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DIVISION A.—CATTLE.

CLASS I.

Short-Horns.

1. Col. John Prince, Sandwich, Canada West.
2. Henry A. Tillotson, Marshall, Michigan.
3. James B. St. John, Utica, Macomb Co.
4. Asa Williams, Lima, Washtenaw.
5. John Thomas, Oxford, Oakland.

CLASS II.

Devons.

1. Edwin Smith, Clinton, Lenawee.
2. Payne K. Leach, Utica, Macomb.
3. Ira R. Grosvenor, Monroe, Monroe.
4. I. P. Alger, Coldwater, Branch.
5. E. H. Davis, Kalamazoo, Kalamazoo.

CLASS III AND V.

Same as Class 1.

CLASS IV.

Same as Class 2.

CLASS VI.

Cross-Blood Cattle.

1. J. D. Yerkes, Northville.
2. Warren Gilbert, Rome, Lenawee.
3. Isaac B. Gilbert, Memphis, Macomb.
4. George Clark, jr., Lapeer, Lapeer Co.
5. J. B. Arms, Scio, Washtenaw.

CLASS VII.

Of Blood and Natives.

1. James I. Russell, Summerfield, Monroe.
2. G. T. McKenzie, Dover, Lenawee.
3. William Wilson, Ypsilanti, Washtenaw.
4. William H. Lester, Utica, Macomb.
5. Benjamin Pierson, Flint, Genesee.

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CLASS VIII.

Working-Oxen.

1. Eber Durham, Farmington, Oakland.
2. John Baird, Clyde, St. Clair.
3. John Norton, Troy, Oakland.
4. Samuel Morey, Quincy, Branch.
5. Benjamin Fowle, Moscow, Hillsdale.

CLASS IX.

Same as Class 8.

CLASS X.

Fat Cattle.

1. Ralph Sackett, Mt. Clemens, Macomb.
2. George W. Rood, Lapeer, Lapeer.
3. Allen Hurley, Coldwater, Branch.
4. Gilbert Gage, Adrian, Lenawee.
5. Ambrose Burr, Plymouth, Wayne.

CLASS XI.

Milch Cows.

1. M. Heydenberk, Kalamazoo, Kalamazoo.
2. Wm. Ten Eyck, Dearborn, Wayne.
3. Leander Sackett, Raisinville, Monroe.
4. S. B. Brown, St. Clair, St. Clair.
5. G. Todd, Rome, Lenawee.

CLASS XII.

Herd Premiums.

1. Robert L. Reannee, Ann Arbor, Washtenaw.
2. James Taylor, Kalamazoo, Kalamazoo.
3. Warren Frink, Battle Creek, Calhoun.
4. John Divine, Lexington, Sanilac.
5. W. S. H. Welton, Grand Rapids, Kent.

CLASS XIII.

Foreign Cattle.

1. Wm. Whitfield, Waterford, Oakland.
2. George Carman, Sturgis, St. Joseph.

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3. Wm. D. Hart, St. Clair, St. Clair.
4. John C. Williams, Greenfield, Wayne.
5. Ezra Cole, Fairfield, Lenawee.

CLASS XIV.

Horses for all work.

1. John N. Lamb, Dryden, Lapeer.
2. Myron Norton, Otisco, Kent.
3. H. H. Emmons, Ecorse, Wayne.
4. Horatio Hurd, Monroe, Monroe.
5. T. M. Parish, Coldwater, Branch.

CLASS XV.

Blood Horses.

1. Charles E. Stuart, Kalamazoo, Kalamazoo.
2. Samuel P. Brady, Detroit, Wayne.
3. Wm. Henderson, Novi, Oakland.
4. A. S. Berry, Adrian, Lenawee.
5. Henry Smith, Flint, Genesee.

CLASS XVI.

Draught Horses.

1. Austin Wales, Erin, Macomb.
2. James Taylor, Almont, Lapeer.
3. Armitage Moor, Three Rivers, St. Joseph.
4. John A. Rucker, Grosse Isle, Wayne.
5. J. M. Hough, Plymouth, Wayne.

CLASS XVII.

Trotting Stallions.

1. M. E. Orofoot, Pontiac, Oakland.
2. W. H. Hawkins, Ypsilanti, Washtenaw.
3. F. V. Smith, Coldwater, Branch.
4. K. C. Baker, Detroit, Wayne.
5. H. H. Norton, Howell, Livingston.

CLASS XVIII.

Matched and Single Horses.

1. W. S. Wilcox, Adrian, Lenawee.

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2. A. L. Hays, Marshall, Calhoun.
3. R. T. Twombly, Detroit, Wayne.
4. John Clark, China, St. Clair.
5. Charles M. Humphrey, Monroe, Monroe.

CLASS XIX.

Foreign Horses.

1. Thomas G. Cole, Monroe, Monroe.
2. C. C. Norton, Grand Rapids, Kent.
3. Robert I. Goetchias, Almont, Lapeer.
4. John E. Kitten, St. Clair, St. Clair.
5. Theodore Armstrong, Bloomfield, Oakland.

CLASS XX.

Sweepstakes.

1. George W. Howe, Detroit, Wayne.
2. B. J. Bidwell, Tecumseh, Lenawee.
3. A. R. P. Eldridge, Mount Clemens, Macomb.
4. A. O. Hyde, Marshall, Calhoun.
5. Thomas Gould, Avon, Oakland.

CLASS XXI.

Jacks and Mules.

1. Andrew Y. Moore, Kalamazoo, Kalamazoo.
2. George W. Dryer, Marshall, Calhoun.
3. Ralph Wadhams, Clyde, St. Clair.
4. F. E. Eldred, Detroit, Wayne.
5. Fred. Williams, Pontiac, Oakland.

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DIVISION B.—SHEEP, SWINE AND POULTRY.

CLASS I.

Spanish, Saxon and Silesian.

1. John Brewer, Ypsilanti.
2. Horace Bradley, Northville.
3. John P. Rowe, Erie, Monroe.
4. Ansel Nichols, Quincy, Branch.
5. Wm. Beals, Rollin, Lenawee.

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CLASS II.

French Merinos.

1. Walter Wright, Adrian.
2. Charles Andrews, Armada, Macomb.
3. M. L. Fitch, Paw Paw, Van Buren.
4. Peter Provondal, Grosse Point, Wayne.
5. Albert Terry, Avon, Oakland.

CLASS III.

Mutton Sheep.

1. A. Harrison, Blissfield, Lenawee county.
2. John Waterman, Summit, Washtenaw county.
3. Chas. Rich, Lapeer.
4. E. Butterworth, Coldwater, Branch.
5. J. Dennison, Troy, Oakland county.

CLASS IV.

Cross of Blood, and Grade Spanish, French, Silesian and Saxon.

1. Arthur Power, Farmington, Oakland.
2. H. O. Hanford, Plymouth.
3. N. S. Wheeler, Cambridge, Lenawee.
4. John F. Gilkey, Richland, Kalamazoo.
5. George Bradley, Northville, Oakland.

CLASS V.

Same as Class 3.

CLASS VI.

Foreign Sheep.

1. N. G. Isbell, Howell, Livingston.
2. Oliver E. Woolcott, Burns, Shiawassee.
3. Danl. Sharpston, Pennfield, Calhoun.
4. David Clarkson, Northville, Wayne.
5. Roland E. Trowbridge, Bloomfield, Oakland.

CLASS VII.

Swine.

1. J. R. Munroe, Paw Paw, Van Buren.
2. C. A. Green, Troy, Oakland.

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3. George St. John, Utica, Macomb.
4. John Richards, Raisin, Lenawee.
5. David Sherman, Monroe, Monroe.

CLASS X.

Poultry.

1. Peter Desnoyer, Hamtramck, Wayne.
2. Mark Arnold, Farmington.
3. George Williams, Coldwater, Branch.
4. W. W. Murphy, Jonesville, Hillsdale.
5. J. B. Barns, Owosso, Shiawassee.

DIVISION C.

CLASS I.

Farm Implements.

1. —— Burnham, Battle Creek, Calhoun.
2. Ira Butterfield, Utica, Macomb.
3. Joel Carpenter, Blissfield, Lenawee.
4. M. L. Shutts, Ypsilanti, Washtenaw.
5. H. H. Vandercook, Jackson, Jackson.

CLASS II.

Farm Implements.

1. Benjamin Miller, Jackson, Jackson.
2. Benjamin Austin, Kalamazoo, Kalamazoo.
3. Moses Rogers, Ann Arbor, Washtenaw.
4. Peter R. Adams, Tecumseh, Lenawee.
5. Wm. Taft, Plymouth, Wayne.

CLASS III.

Farm Implements.

1. Clinton B. Fisk, Coldwater, Branch.
2. G. W. Kennedy, Hanover, Jackson.
3. ——— Pœny, Novi, Oakland.
4. James Monroe, Albion, Calhoun.
5. Calvin Wheeler, Summit, Washtenaw.

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CLASS IV.

Farm Implements.

1. James Bayley, Troy, Oakland.
2. Samuel Rappelyee, Ridgeway, Monroe.
3. Wm. Congdon, Plymouth, Wayne.
4. John H. Button, Farmington, Oakland.
5. Andrew J. Kinney, Erie, Monroe.

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DIVISION D.—BUTTER, CHEESE AND HONEY.

1. H. E. DeGarmo, Ypsilanti, Washtenaw.
2. Mrs. H. R. Andrews, Detroit.
3. Mrs. J. D. Yerkes, Northville, Wayne.
4. Mrs. George W. Collins, Farmington, Oakland.
5. B. Harvey, Palmyra, Lenawee.

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DIVISION E.—DOMESTIC MANUFACTURES.

CLASS I.

1. George C. Munroe, Jonesville.
2. Dalton Morris, Little Prairie Ronde, Cass.
3. Mrs. O. C. Comstock, Marshall, Calhoun.
4. Mrs. Jehial Davis, Plymouth, Wayne.
5. Mrs. M. Howard Webster, Detroit, Wayne.

CLASS II.

Factory-Made.

1. Wm. Wallace, Battle Creek, Calhoun.
2. Peter Fralick, Plymouth, Wayne.
3. David Ingalls, Almont, Lapeer.
4. A. L. Williams, Owasso, Shiawassee.
5. A. S. Lapham, Northville, Wayne.

CLASS III.

1. H. P. Baldwin, Detroit.
2. Daniel L. Devee, Dundee, Monroe.
3. Ira Burdick, Kalamazoo.

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4. Isaac Crane, Ypsilanti.
5. Stephen S. Hicks, Lapeer.

CLASS IV.

1. John Patton, Detroit.
2. Dexter Mussey, Romeo, Macomb.
3. ——— Chittenden, Kalamazoo.
4. Alvin D. Shudbolt, Big Beaver, Oakland.
5. A. J. Boss, Flint, Genessee.

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DIVISION F.

CLASS I.

Paintings, Drawings, Daguerreotypes and Musical Instruments.

1. L. D. Norris, Ypsilanti.
2. D. B. Duffield, Detroit.
3. George W. Watson, Coldwater.
4. O. B. Wilcox, Detroit.
5. J. C. Holmes, Lansing.

CLASS II.

Needle, Shell and Wax Work.

1. Rev. Mr. Jacokes, Wyandotte, Wayne.
2. Mrs. John Rogers, Plymouth, Wayne.
3. Mrs. John Starkweather, Ypsilanti.
4. Mrs. Davidson, Highland, Oakland.
5. Miss Mary Wheeler, Northville.

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DIVISION G.

CLASS I.

Flowers.

1. M. Howard Webster, Detroit.
2. Mrs. D. U. McNair, Kalamazoo.
3. Mrs. H. H. Emmons, Ecorse,
4. Mrs. B. Follett, Ypsilanti.
5. Mrs. J. B. Barnes, Owasso, Shiawassee.

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CLASS II.

Fruit.

1. Alfred Brush, Detroit.
2. S. Lathrop, Adrian, Lenawee.
3. Moses Wisner, Pontiac.
4. R. W. Ingersoll, Monroe.
5. Argulus Streeter, Romeo, Macomb.

CLASS III.

Pears.

1. Rev. George Duffield, Detroit.
2. Sterling Perkins, Coldwater, Branch.
3. August Thoos, Detroit.
4. B. Hathaway, Little Prairie Ronde, Cass.
5. Prince Bennett, Ypsilanti.

CLASS IV.

Miscellaneous Fruits.

1. T. T. Lyon, Plymouth.
2. Henry C. Gilbert, Coldwater, Branch.
3. Wm. Adair, Hamtramck.
4. E. Wright Hall, Mount Clemens, Macomb.
5. Rev. Moses Hunter, Grosse Isle, Wayne.

CLASS V.

Vegetables.

1. —— Crabb, Hamtramck.
2. George W. Collins, Farmington, Oakland.
3. John Dillingham, Howell, Livingston.
4. A. L. Stevens, Plymouth.
5. Thomas M. Clumpha, Ypsilanti.

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DIVISION H.—GRAIN, FLOUR AND SEEDS.

1. E. G. Morton, Monroe.
2. Fitz H. Stevens, Paw Paw, Van Buren.
3. S. G. Rowley, Ypsilanti.

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4. J. B. Springer, Livonia, Wayne.
5. Winfield Scott, Northville, Wayne.

Bread.

1. Mrs. L. B. Adams, Detroit.
2. Mrs. George W. Dryer, Marengo, Calhoun.
3. Mrs. C. W. Green, Farmington.
4. Mrs. H. O. Hanford, Plymouth.
5. Mrs. Luther Safford, Plymouth, Wayne.

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DIVISION K.—MISCELLANEOUS ARTICLES.

1. Kinsley S. Bingham, Kensington, Livingston.
2. John S. Barry, Constantine, St. Joseph.
3. Daniel S. Bacon, Monroe, Monroe.
4. S. G. Pattison, Marengo, Calhoun.
5. Wm. H. Jennings, Rochester, Oakland.

On motion of Mr. Crippen, it was

Resolved, That the Executive Committee shall fill all vacancies in the Viewing Committees, and that the Business Committee be instructed to furnish hay, straw and water only, at the next Annual Fair, for horses, cattle and sheep.

Mr. Crippen moved to recommit the report of the Committee on Premium List to the Committee, with instructions to strike out so much as provides for a premium on the five best colts from the same dam, exhibited with the dam.

Mr. Hart moved to amend by adding so much as relates to four year old colts.

Lost.

Question recurring on the recommitment, it was lost.

Mr. Crippen moved to recommit, with instructions to so amend that the five colts placed on exhibition, with or without sire, shall be from different dams, and the five colts from one dam shall be from different sires.

Laid on the table.

Mr. Crippen then moved to recommit with instructions to so amend that a mare with two or more colts by her side, by the same or different sire, shall be allowed to compete.

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Carried.

Mr. Crippen then moved to amend so that five colts shown with a single sire, shall be from different dams.

Carried.

On motion, the following resolutions were passed :

Resolved, That the proceedings and revised premium list be published in the *Michigan Farmer*.

Resolved, That when the Committee adjourns it will adjourn to the 28th September, at such place as the Secretary shall notify the Executive Committee to meet.

Mr. Montgomery, from the Committee to decide to which county should be awarded the premium offered to that county which should receive the greatest amount of premiums in proportion to its population and distance from the place of holding the State Fair, made the following report:

The committee appointed to make the award of the prize offered to the county that should receive the greatest amount of premiums at the State Fair of 1857, population and distance from the place of holding the Fair being taken into consideration, respectfully report that they have examined the census of 1854, and find that the counties which were the principal contestants, have the following population:

Wayne,	65,778
Oakland,	31,884
Washtenaw,	28,836
Branch,	15,724

And that the premiums awarded to persons residing in these respective counties were as follows:

Branch,	$152 00
Oakland,	304 00
Washtenaw,	235 00
Wayne,	815 00

From this it is proved that the rate of premiums per capita is as follows:

Branch,	$0.0096
Oakland,	0.0095
Washtenaw,	0.0081
Wayne,	0.0123

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The committee, thereore, award the premium to Branch county as having taken the largest amount of premiums in proportion to her population and distance from the place of holding the State Fair.

W. H. MONTGOMERY,
J. J. NEWELL,
J. S. TIBBITTS.

The President having announced that there was no further business before the Committee, the Committee adjourned *sine die*.

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ANNUAL ADDRESS

DELIVERED BY

SANFORD HOWARD, ESQ.,

(Editor of the Boston Cultivator,)

BEFORE THE

MICHIGAN STATE AGRICULTURAL SOCIETY,

IN DETROIT, OCTOBER 1st, 1857.

DEFECTS OF AMERICAN AGRICULTURE, AND THEIR REMEDIES.

MR. PRESIDENT:

I have accepted the invitation to address your Society, with some hesitation. Addresses called agricultural are by no means rare in these days, and the selection of a subject or subjects, interesting and appropriate to an occasion like this, is not an easy task. The field has long been occupied by able minds, and original discoveries are not to be expected as of frequent occurrence. For my own part, I shall make no attempt to startle you with new ideas or novel arguments.

In reflecting how my services could be rendered most acceptable, I have concluded to offer a few practical suggestions on *The Defects of American Agriculture, and The Means of Remedying Them.*

The most prominent defect of American Agriculture is the exhaustion of the fertility of the soil. In general, the course of what is called cultivation, in this country, has been one of devastation. This may sound harsh to the ear, but truth must not be suppressed because it is disagreeable. The evidences of the deterioration of the soil are seen from the shore of the Atlantic to the Valley of the Mississippi. The

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wearing-out process is not confined to New England, or the Eastern portions of the Middle and Southern States, but has crossed the Alleghanies, and is obvious in many parts of Ohio—that State so lately regarded as the Hesperian Paradise, producing the food of man in almost spontaneous profusion! Probably the same tendencies are perceptible in other Western States, though in reference to them I am unable to speak so positively, from want of personal observation. But there is no need of going into particulars to prove this decrease of fertility—it will be generally admitted. It may be well to say, however, that I do not cite the wheat crop as a proper criterion in the case, it being well known that the deficiency in this crop of late years, in the Eastern and a portion of the Western States, is owing much to the prevalence of an insect (the wheat midge) which was unknown in this country till about 1830. Its first appearance was in Lower Canada, from whence it has been gradually spreading to the south and west.

The first question that suggests itself in regard to the deterioration of the soil, is,—How shall it be obviated? In considering this question, it will be proper to notice the nature of the soil, and to compare our circumstances with those of older nations. There are old-settled countries whose powers of production, instead of diminishing, are greater at the present time than they were a thousand years ago. The remark, of course, is intended to apply to land occupied for this length of time. The fact is proved not only by their supporting a greater population than formerly, but by authentic accounts of the amount of agricultural products. Great Britain, Holland, Belgium and other European States may be mentioned as furnishing examples in point. How has fertility been maintained there? The answer in substance is—by paying due attention to the cultivation of crops in respect to their different effects on the soil—by keeping large numbers of domestic animals, saving all the manure that could be obtained from them and applying it to the soil. This answer suggests a line of policy for ourselves, and why should we not follow in the same direction?

I am aware that a different doctrine has been broached. It has been held that, as our circumstances differ in some respects from those of the countries named, their examples are nothing to us—that as long as we have unsettled territory, it is better we should exhaust the soil, leaving the exhausted portions, and taking up new lands to be in turn overrun

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and abandoned. If it is asked, what is to be done when the devastating tide has swept over the continent, and there are no more lands to conquer? The reply from those who hold this doctrine is—that calamity, if it be one, can only fall on posterity so remote that it is of no consequence; and besides—what obligations are we under to posterity? What did they ever do for us?

The first thing in regard to the question before us—the preservation of fertility—is the proper division of the land in reference to products best adapted to different soils and localities. Some soils are naturally so poor that they will not pay for cultivation. Proximity to good markets and peculiar facilities for the production of some crop for which there is a demand, may modify this position, but it will stand as a general fact. Such land should be devoted to the growth of wood—the different species of trees being planted according to their adaptation to the soil and situation. This of itself would make a vast change in regard to the aspect of the country. In the older settled portions there are large tracts over which the forest should be permitted to resume its shade—although this by no means amounts to an entire abandonment of the regions alluded to.

Having decided the question as to what land should be cultivated, the next step is to adopt for the remainder, that course which will insure the best returns—to suit the crops to the land and to the market—and pursue a system which, while it enables the fathers to live comfortably, shall not entail poverty on the children.

The saving and application of manure comes in here as a matter of the highest importance. I am conscious that among men accustomed to cultivate a soil of great natural fertility, it may seem that an undue prominence is given to manures; but it may be safely assumed that all soils are liable to exhaustion, except those which are kept up by water—either by irrigation or ordinary flooding. It is true the necessity for manures, and their value, depends on the condition of the soil—or on the quantity of the food of plants which it naturally possesses. This must govern the course of the farmer in regard to the amount of manure to be obtained and applied. In some instances it may only be necessary to save a portion of the manure from domestic animals to supply the waste of cultivation; but over a large portion of the country, all the fertilizing materials which are available, are required. In fact, it is a con-

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stant inquiry, how more of these materials can be obtained. To supply this call, guano has been introduced, and various portable fertilizers have been manufactured. Peruvian guano has been applied extensively in some sections, and in many instances with advantage. Other guanos have been more uncertain in their effects, and the once-vaunted Mexican, and the so-called Chilian, which ignorant or unprincipled men so earnestly recommended, are only remembered by the farmers for the money they cost and the good they have *not* done. Super-phosphate of lime —with its various prefixes of "improved," "nitrogenized," "ammoniated," &c., has, when honestly made, (a qualification which experience proves is necessary,) been advantageously applied. Several of these substances are useful as auxiliaries to the ordinary manures of the farm. But the true course of the farmer is, first to secure all the manures—solid and liquid—obtainable at home, before spending his money for others of more doubtful effects. Let him not be led astray by the specious argument that he "cannot afford to use barn-yard manures," that he had "better burn them up, or allow them to be washed away," and buy Professor ———'s magic compound for his fields!

The question as to the application of manure to different crops, to different soils, and under various circumstances, opens up too broad a field to be fully examined here. In regard to one or two points, however, a passing word may be allowed.

It is a subject of frequent discussion whether ordinary yard manure should be applied in a fresh or in a fermented state. It is generally admitted that the nitrogen of these manures is their most valuable constituent. We are told by various chemists that plants take their nitrogen mostly in the form of ammonia; and we are further told by these same authorities that ammonia is a product of fermentation. If, then, ammonia, possesses the great value attributed to it, is it not obvious that the manure should pass through the process by which it is produced? Perhaps it may be supposed by some that fermentation takes place when the manure is spread on and mixed with the soil. But the decay which takes place under these circumstances—unless the quantity of manure is much greater than is ordinarily applied—is not that which may be called fermentation, but that more slow and gradual decomposition termed eramacausis. So far, then, as we can rely on the deductions of chemistry, the fermentation of manure is the best, if not the

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only mode of developing ammonia—the importance of which, in manures, is, with few exceptions, admitted by agricultural chemists. From the use of the term fermentation, it should not be inferred that a *burning* degree of heat is desired—this would produce waste by throwing off the ammoniacal and other gases—it is only that degree of heat that is sufficient to soften and break down fibrous matter without consuming it, which is wanted. The practical observer soon learns when the mass reaches this state.

Before leaving this part of our subject, it should be remarked, as an additional argument for keeping domestic animals, that grass—especially when grazed or pastured—exhausts soils in general less than most other crops—much less than grain crops. This is so well known in some sections, and the advantages of stock-farming are so appreciated, that it has passed into an adage: "The more grass the more cattle, the more cattle the more manure, the more manure the more grain."

Irrigation, as a means of preserving and even increasing the fertility of the soil, is a subject which demands more attention in this country than it has hitherto received. Perhaps there is no country where this source of fertility is so much neglected as in ours. The question is worthy of consideration, whether a system of artificial watering may not be advantageously adopted in many instances. Although our annual quantity of rain is comparatively large, yet our climate is characteristically a dry one. Drouth is the greatest obstacle our farmers have to contend against. The remark will apply more particularly to the level portions of the Western States, where rains are usually less frequent in summer than in the hilly and mountainous sections of the East.

The general circumstances of some of our western prairies seem not dissimilar to some of the celebrated plains of the Old Continent, which at different periods, through the agency of irrigation, have supported an immense population, and been regarded as the granaries of the world.

In hilly sections, where springs and streams abound, irrigation may be practised with comparative ease and cheapness. Where these facilities are not available, a different course must be adopted—what one would in all respects be most successful, can only be ascertained by careful and thorough trial. In some cases, reservoirs might be constructed in which water from rain and snow might be secured at certain seasons, and from which it might be conducted to growing crops simply by

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gravitation. In other cases it might be necessary to raise water by machinery from streams or natural lakes or basins, to such elevations as will admit of its proper distribution. Wind, perhaps, may be advantageously used as a power for performing this labor. It is not necessary that the power should be constant—if the reservoir is of suitable capacity, a quantity of water may be kept on hand against all contingencies, even if the machinery was in operation but a small part of the time.

There can be no question that water—even the purest water—is not only capable of benefitting crops simply by the supply of that element and its solvent action on other substances, but is also capable of imparting actual fertility to the soil. Ample experience has established this fact, although the full explanation of it may not be so readily given We know, however, from chemical investigation, that water contains some of the most important elements of plant-food—as carbonic acid and ammonia. We know, too, that the soil has the power of absorbing these substances, and this explains, in part at least, why irrigated lands grow richer. It is, therefore, a reason in favor of irrigation that all the benefit derived from it is clear gain—nobody, nothing, is the worse for it—the result is obtained through an agent which would otherwise have remained idle and unproductive.

One word may be necessary in regard to land suitable for irrigation. The remark is sometimes made, that such and such land does not need, irrigation, "because it is wet enough now." The land is perhaps too wet, and in this state could not be much benefitted by irrigation. The soil and subsoil may abound in water which is stagnant, or so nearly so that plants derive no benefit from it, and it may even be the means of *poisoning* the soil by causing a deposit of noxious substances—as compounds of iron, and various acids. Drain this soil, so that water will readily pass through it, and irrigation will produce excellent effects. It must be remembered that it is only a portion of the constituents of water that plants can feed on, and that when they have taken this portion, the remainder, unless it is removed, obstructs the economy of the plant, by surrounding and clogging its feeding organs, so that it is unable to take in congenial food, and finally deranges its functions and produces diseases. These difficulties are obviated at once by proper drainage—this permits the water to pass through the soil with such a

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degree of motion, that while the plant is enabled to draw from it its appropriate food, the unwholesome substances in the soil are carried away.

The remarks just made in reference to drainage are rather incidental, than designed as an exposition of the general advantages of that operation. It is proper to speak somewhat more particularly on the subject in this connection. If drainage cannot be strictly considered a means of *preserving* the fertility of the soil, it is certainly one of the most important means of *developing* fertility, and in this respect its practice would remove a serious defect of agriculture. The present occasion will not permit the presentation of details in regard to the circumstances under which drainage should be carried on, or a minute description of the different modes of doing the work—a brief notice of main principles is all that will be attempted.

It is a common impression that, as our climate is a dry one, drainage is comparatively unnecessary here. This objection is made without due regard to the effects of drainage. It is a fact abundantly proved that some soils which suffer greatly from drouth, are rendered by drainage less likely to be injured from this cause. Clayey soils, which do not readily admit the passage of rain-water through them, are run into mortar in a wet time, and in a dry time, are baked to that degree that the roots of vegetation cannot extend themselves. The effect of drainage in such cases is to carry off the water, or allow it to sink so fast that it does not pack the soil, so that, instead of becoming consolidated, it remains tolerably open and friable, in which state it not only holds more moisture, but the plant is enabled to extend its roots freely in search of it.

As an example of the great advantages to be derived from draining tenacious soils, I do not hesitate to refer to the farm of Mr. John Johnston, near Geneva, in the State of New York, and those of Mr. Swan and others in the same section. The land, like most of the undrained land in the same neighborhood, was formerly much affected by drouth —the crops on it perished by the extremes of the condition under which they were placed, being embedded in mud at one time, and in baked clay at another. Now they have at all times a friable loam. The yield of wheat on this land has been increased more than a hundred per cent. by drainage alone, averaging upwards of thirty bushels to the acre for several years past. Other crops have increased in the same ratio.

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Some of the obvious indications of the necessity of drainage may be enumerated as follows:

1. It is required wherever the soil is of so tenacious a character that the surface is puddled by rain, or baked by drouth, or wherever winter grain or grass is killed by being *hove out;* or

2. Wherever what is called *hard pan* (a stratum of impervious earth) comes within two feet of the surface; or

3. Wherever aquatic or sub-aquatic plants grow—these always denoting the presence of stagnant water in the soil or subsoil.

Under the head of defects of agriculture, another class of subjects deserve notice. They may, perhaps, be aptly characterized as *hindrances to improvement.* Among these may be mentioned ultraisms, or extreme and exaggerated statements. In regard to drainage, for instance—of the advantages of which some remarks have just been made—it has been asserted by editors of papers and by authors of agricultural addresses, that there is no land in the country worth cultivating that does not need under-draining. And in a book by a "Consulting Agriculturist," purporting to embrace the "Elements of Agriculture," it is asserted broadly, and without qualification, that under-draining "*entirely* prevents drouth." It is asserted in the same connection, that this operation prevents grasses from running out—a result which it is alleged is produced, in part, by "preventing the accumulation of poisonous *excrementitious* matter."

Now every practical farmer of common sense and common observation, knows that such statements are unfounded. He knows there is land that is worth cultivating, that does not need under-draining; he knows that whatever may be the influence of drainage in lessening the injury from drouth, on some soils, it cannot *entirely prevent* that injury in all cases, while on other soils it has no such influence at all.

Similar extravagant statements might be quoted in reference to deep ploughing and sub-soil ploughing—operations, highly proper under certain circumstances, but which some advocates insist should be practiced universally—even to ploughing all soils to the depth of several feet.

Other ultraisms have originated in higher sources, if they do not come with more authority. But it is an adage that great men are not always wise men. Carried away by some happy discovery or favorite

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idea, they sometimes attempt to generalize from too narrow premises, and draw unwarrantable deductions from isolated facts. Some chemists, for instance, have seen some kinds of vegetation produced by soils which, according to analysis were destitute of organic matter, and it is thence inferred that organic matter in the soil is unnecessary for all plants—that they have the power of obtaining their carbonic acid and ammonia from the atmosphere, and hence it is unnecessary to search for them in the manures we use—in other words, that simply as manures, these substances are worthless. But practical observation teaches that different plants are endued with different powers. The white birch and the white and pitch pine can grow and perfect themselves on the most barren sand or gravel, while other trees, and particularly the species of plants which contribute most directly to the sustenance of man, have no such power—they cannot flourish in such situations.

It should be borne in mind that there are principles in animal and vegetable physiology which cannot be explained by chemical analysis. If this were to be taken as our only guide, we might, perhaps, infer that "all flesh is grass" in a sense more literal than is consistent with truth. Chemical analysis shows little or no difference in the flesh of man and the flesh of the ox. Yet man cannot live on grass, though he thrives on the flesh of the ox, which was derived from grass.

Under the sanction of high names, theories have been promulgated in regard to the organization of domestic animals, which are calculated to do injury rather than good. It has been held that *small lungs* are desirable in animals designed for fattening. Without going into detail to combat this idea, it may be sufficient to say that practical observation supports the position of Dr. Cline, that, "on the size and soundness of the lungs, the health of the animal principally depends. The power of converting food into nourishment is in proportion to their size. An animal with large lungs, is capable of converting any given quantity of food into more nourishment than one with smaller lungs, and therefore has a greater aptitude to fatten."

Another example of erroneous teaching in connection with this subject, may be mentioned. A lecturer on agriculture in a public institution, stated as a reason why certain breeds of cattle were better for beef than others, was that they had a much larger proportion of what is

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called the *round*, and that this was the most *valuable* part of the carcass. Now at the very time this statement was made, the price of the round in our eastern markets was *one-third less* per pound than sirloins and rumps. Besides the "convex or circular" form of the quarter which was recommended in order that there might be a greater quantity of this *round* meat, is indicative of an unprofitable animal—one having coarse flesh throughout the carcass, with the fat, if any is formed, of a soft, oily nature. Judicious breeders avoid such animals.

The impositions of mercenary and unscrupulous men, may be reckoned among other hindrances to improvement in agriculture. These "are too numerous to mention." The farmers manifest a desire to enrich their farms, and they are at once beset with the offer of various substances for which high pretensions are set up, but which are manufactured mainly with reference to the profit of the vender. The "Chilian Guano" is only a type of these. The farmer is induced to believe that chemistry may teach him something useful in regard to the management of his farm. "Consulting Agriculturists" offer their services in making five-dollar analyses of soils, and in giving "letters of advice" at twenty-five dollars each. The potato crop is assailed by *rot*, and the farmer becomes anxious to obtain some remedy against this destructive malady. Soon the country swarms with publications on the subject, which can be had for *money;* advertisements appear, stating that on the receipt of a certain sum from any individual, the advertiser will communicate a sure remedy; the seed of new kinds, in which the rotting disposition is represented to have been *bred out*, is offered at five dollars an ounce. Curiosity is excited in regard to the characteristics of different kinds of poultry, and forthwith there is issued a flood of books made expressly to *sell*, but which are only worth preserving as evidence of the foolishness and baseness of the authors. Thus are the good intentions of the people of the "rural districts" taken advantage of.

The ultraisms, erroneous theories and impositions alluded to, are hindrances to improvement in various ways. In some instances they propagate error, in others they create disgust. Persons who find they have been led astray, are apt to have their caution aroused, and under the sense of injury they may have suffered, are inclined to exercise an undue opposition to innovation. The prejudices of many honest and naturally sagacious minds are excited by witnessing attempts to introduce things

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which common sense teaches have no value. Thus a barrier is raised to investigation and improvement.

Among the means, not already alluded to, of remedying the defects of agriculture, may be mentioned Agricultural Societies, Agricultural Schools and Experimental Farms.

We have numerous agricultural societies in the country, most of which have doubtless effected more or less good, though none, perhaps, have accomplished all that is practicable. A society, as well as an individual, should act on a plan—should aim at certain objects, and should adopt the best and most economical measures in the pursuit of those objects. It is not sufficient that a society should offer premiums for the "best" animals and things; it should present, as far as possible, well defined standards, and explain what constitutes excellence in the various departments of industry which it desires to encourage. A horse or cow may be best for some particular object, and at the same time be inferior to some other of the species for another object. Hence their merits can only be estimated in reference to a specific purpose. Without some rule of this kind, awards may be left entirely to the judgment or caprice of persons who happen to be selected for the occasion. Not only this, but the society may even stultify itself by having its favors bestowed on very different animals or articles at different times—an inconsistency which must defeat any effort at improvement in the subject involved.

The proper objects of agricultural societies are various. The annual exhibition, or show, though useful to a certain extent, is only one of the means of benefitting agriculture, and should not be permitted to absorb the entire efforts of an association. An important and legitimate object of such societies is the settlement of doubtful questions. These are numerous. Of particular importance are those which relate to the comparative advantages of different modes of culture for different crops on different soils; the comparative value and most economical modes of using different substances in feeding domestic animals; the comparative value of different breeds of animals for different purposes and localities. The settlement of such questions involves too much expense for individuals to incur; but experiments might be made in regard to them by associations, which would elicit many facts valuable as guides to practice.

No subject relating to agriculture has of late years attracted more attention than that of Agricultural Schools. I am happy to know that one of the most encouraging examples in regard to the establishment of

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such institutions has already been made in your own State. It would be presumptuous in me to proffer advice in regard to the management of such an institution, and a few general suggestions only will be attempted under this head.

It is obvious that the value of instruction depends on its character—its consistency with truth. In the present imperfect state of agricultural science, there is probably more danger that too much will be taught, than too little—that mere assumption will be made to pass as established fact. Some things, to be sure, are established in regard to agriculture, but much is yet to be learned. Agricultural schools should not only regard the dissemination of known truths, but should seek to find out new ones—attending both to the origination and diffusion of knowledge. I am pleased to see, from the highly sensible address of the President of your Agricultural College, that it is proposed to make the details of instruction, as there given, conform to experience. This is the true course. Science with practice—or rather science derived from practice, should be the aim. By the term science, is merely meant the systematic arrangement of facts.

Every attempt to establish a system of Agriculture on any other basis must fail, as all such attempts have failed. Chemistry may do much in an explanatory and suggestive way, but it cannot be denied that too much has been claimed for it by advocates whose zeal was not according to knowledge. It has been assumed that the results of chemical analysis should be taken, unqualifiedly, as the foundation of practical husbandry. These unreasonable and unjust claims have tended to produce distrust in regard to the value of chemistry and the efforts to reduce Agriculture to a science. In the language of Dr. Voelcker, "It must be regarded as a matter of deep regret, that the want of caution and modesty on the part of scientific men, has contributed more than perhaps anything else, to bring science into discredit with the Agricultural public." The position of Dr. Anderson, of the Edinburgh Chemical Association, comprehends the proper ground on this subject, viz: that "it is the office of chemistry to suggest, not to lead, in Agriculture."

Experimental farms are necessary appendages of Agricultural Schools. They are needed as a means of testing theories and eliciting facts. The discrepancies between some of the deductions of chemistry and actual practice, have already been alluded to. Other cases might be

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cited. It was inferred from analysis that the phosphates were specially required as manure for wheat, and that organic manures were more particularly suited to turnips. But the careful experiments of Messrs. Gilbert and Lawes, at Rothamsted, have demonstrated—what much previous experience had indicated—that phosphoric manures are very useful for turnips, but less so for wheat, while the latter, much more than the former, is benefited by ammonia.

It has been supposed that chemical analysis of soils would be of great service in a practical view, and some writers have gone so far as to lay it down as one of the "elements" of Agriculture, that no system of husbandry could be formed without this as its basis. Yet experiment has shown that an application of super-phosphate of lime to the soil, equivalent to fifty pounds of phosphoric acid to the acre, made a difference to the crop (turnips) of more than *nine tons* to the acre, though the most skillful analysis could not detect any difference in the soil. Such facts show that the analysis of soils is, in the language of Boussingault, "more curious than useful." The analysis of *manures* is a different matter. In regard to soils, a good chemist, (Mr. Harris, of the Genesee Farmer,) has said—"An acre of soil seven inches deep, weighs at least two million pounds. Fifty pounds of phosphoric acid, would be one part in forty thousand. Such a minute quantity is far beyond the range of quantitative analysis." But in manures the substances which constitute the principal value—ammonia and phosphates—bear a much nearer proportion to the whole bulk; and it has been repeatedly shown that analysis may determine the worth of a manure with an approximation to accuracy.

But if Agriculture has not received from chemistry all that the over-sanguine have claimed or promised, enough has been done to justify continued investigation. By the aid of properly regulated Schools and experimental farms, the results derived from the laboratory, and those from practical experience, will go hand in hand.

May the farmers of America avail themselves of all the lights which can aid them in the practice of the art which constitutes the basis of civilization, and in so doing reap an abundant recompense of reward.

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REPORTS

OF THE

VIEWING COMMITTEES

OF THE NINTH ANNUAL EXHIBITION OF THE

MICHIGAN STATE AGRICULTURAL SOCIETY,

Held at the Hamtramck Course, near Detroit, on Tuesday, Wednesday, Thursday and Friday, Sept. 29th and 30th, and Oct. 1st and 2d, 1857.

DIVISION A.—CATTLE.

CLASS I.

Short Horns.

The Committee on Short Horns would respectfully report, that they found great difficulty in giving each animal its just merits; the competition being very close, as the Class was fully represented by very superior animals.

The Committee report that it is with pleasure that they find great improvement in this Class of Cattle, resulting from the importation by our farmers of several fine herds from other States.

The Committee make the following awards:

Bulls, four years old and over.

Entry.

20. S. W. Dexter, of Dexter, Sirloin, 4 years, 1st prem., ... $12 00
128. M. Shoemaker, Jackson, Prince Edwards, 4 years, 2d premium, ... 10 00
177. M. Shoemaker, Jackson, Roebuck, 6 years, 3d prem., ... 8 00
11. Silas Sly & Sons, Plymouth, 7 years, Lord Byron—to this bull the Committee recommend a Diploma.

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Bulls, three years old.

Entry.

150. Wm. Beale, Rollin, Haymaker, 1st premium, ... $10 00
168. D. M. Uhl, Ypsilanti, Lenox, 2d prem., ... 8 00
32. Wm. Morris, Burr Oak, Prince Albert, ... 6 00

Bulls, two years old.

123. Dr. F. Ransom, Kalamazoo, Bannerboy, 1st prem., ... 8 00
8. Silas Sly & Sons, Plymouth, Wolverine, 2d prem., ... 6 00

Bulls, one year old.

56. J. B. Crippen, Coldwater, Orpheus, 1st prem., ... 7 00
113. W. Frink, Battle Creek, Henry Clay, 2d prem., ... 5 00

Bull Calves.

84. D. Littlefield, Coldwater, Cato, 1st prem., ... 5 00
114. Wm. Frink, Battle Creek, Bletsoe, 2d prem., ... 4 00
47. Joshua Simmons, Farmington, Duke of Wayne, 3d prem., 3 00

Cows, five years old and over.

58. J. B. Crippen, Coldwater, Speck, 9 years, 1st prem., ... 10 00
87. H. E. Degarmo, Ypsilanti, Bright Eyes, 9 years, 2d prem., 8 00
59. J. B. Crippen, Coldwater, Beauty, 7 years, ... 6 00
112. W. Frink, Battle Creek, Beauty, 6 years, the Committee award a Diploma.

Cows, three years and under five.

61. J. B. Crippen, Coldwater, Viola, 1st premium, ... 10 00
18. Asa Williams, Lima, Topsy, 2d prem., ... 8 00
14. Silas Sly & Sons, Plymouth, Pride of Hoosick, ... 6 00

Heifers, two years old.

69. D. M. Uhl, Ypsilanti, Bell Flower, 1st prem., ... 8 00
17. Silas Sly & Sons, Plymouth, Roan Beauty, 2d prem., ... 6 00
62. J. B. Crippen, Coldwater, Branch County Belle, 3d prem., 4 00

Heifers, one year old.

63. J. B. Crippen, Coldwater, Gipsey, 1st prem., ... 7 00
88. H. E. Degarmo, Ypsilanti, Lucy Stone, 2d, ... 5 00
13. Silas Sly, Plymouth, Hoosick Lady, 3d, ... 3 00

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Heifer Calves.

Entry.

10. Silas Sly & Son, Plymouth, Lady Guelph, 1st prem., ... $5 00
138. M. Shoemaker, Jackson, Esterville 5th, 2d, ... 4 00
135. do do Bellflower, 3d, ... 3 00

This Committee further report that there were no Herefords on exhibition.

ROBERT ROME,
DARWIN WILSON,
WM. WHITFIELD,
E. ARNOLD,
S. P. WORMLEY,
Committee.

CLASS II.

Devons.

Your Committee would respectfully report, that after careful examination of the animals in their Division, they have unanimously awarded the following prizes:

Bulls, three years old and under five.

93. C. H. Williams, Coldwater, Duke 2d, 1st prem., ... $10 00
171. J. W. Childs, Paint Creek, Hero, 2d, ... 8 00

Bulls, one year old.

40. John Allen, Coldwater, Young Duke, 1st prem., ... 7 00
35. G. W. Gale, Ypsilanti, Red Jacket, 2d, ... 5 00

Bull Calves.

42. John Allen, Coldwater, Billy, 1st prem., ... 5 00
85. D. Littlefield, Coldwater, 2d, ... 4 00
101. C. H. Williams, Coldwater, 3d, ... 3 00

Cows, five years old and over.

37. John Allen, Coldwater, Jane Williams, 5 years, 1st prem., 10 00
95. C. H. Williams, Coldwater, Celeste, 6 years, 2d, ... 8 00
36. John Allen, Coldwater, Rosanna, 6 years, 3d, ... 6 00

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Cows, three years and under five.

Entry.		
38.	John Allen, Coldwater, Beauty, 1st prem.,	$10 00
140.	M. Shoemaker, Jackson, Red Rose, 2d,	8 00
173.	J. W. Childs, Paint Creek, Lady Jane, 3d,	6 00

Heifers, two years old.

98.	C. H. Williams, Coldwater, 1st premium, Ella,	8 00
39.	John Allen, Coldwater, 2d prem., Beauty,	6 00
97.	C. H. Williams, Coldwater, 3d prem., Althea,	4 00

Heifers, one year old.

99.	C. H. Williams, Coldwater, 1st prem., Flora,	7 00
41.	John Allen, Coldwater, 2d prem., Jenny,	5 00
141.	M. Shoemaker, Jackson, 3d prem., Red Rose, 2d,	3 00

Heifer Calves.

100.	C. H. Williams, Coldwater, 1st prem., Lady Catherine,	5 00
45.	John Allen, Coldwater, 2d prem., Fanny,	4 00

There were no Ayrshires exhibited.

W. R. SCHUYLER,
WM. H. LESTER,
WARREN FRINK,
H. B. SLY,
Committee.

CLASS V.

Cross of Blood Cattle.

The Committee respectfully report that they have awarded the following Premiums:

Bulls, one year old.

56.	J. B. Crippen, 1st prem.,	$5 00
5.	J. C. Williams, Greenfield, 2d,	4 00

Bull Calves.

81.	D. C. Blair, Tipton, 1st prem.,	4 00
82.	" " " 2d "	2 00

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Cows, three years old and over.

Entry.

78. D. C. Blair, Tipton, 1st prem., ... $10 00
51. C. W. Green, Farmington, 2d, ... 8 00
50. " " " 3d, ... 6 00

Cows, three years old.

52. C. W. Green, 1st prem., ... 8 00

Heifers, two years old.

53. C. W. Green, 1st prem., ... 7 00

Heifer Calves.

55. C. W. Green, 1st prem., ... 4 00
None worthy, 2d, ... 2 00
54. C. W. Green, Farmington, 3d, ... 1 00

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CLASS VI.

Cross of Blood and Native.

The Committee on Cross of Blood and Native Cattle would respectfully report that they have carefully examined all the animals presented for their consideration, and award as follows:

Bulls, three years old.

2. B. Dewey, Troy, 1st prem., ... $10 00
122. John Common, Roseville, 2d, ... 8 00
1. B. Dewey, 3d, ... 6 00

Bulls, two years old.

67. P. M. Easterly, Marshall, 1st prem., ... 8 00

With this animal there was no competition, but being a very fine animal, we considered him well worthy of the first premium.

Cows, five years old and over.

116. J. S. Tibbitts, Plymouth, 1st prem., ... 10 00
71. D. M. Uhl, 2d, ... 8 00
29. J. H. Button, Farmington, 3d, ... 6 00

Cows, three years old.

153. Silas Sly & Son, 1st prem., ... 8 00

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Entry.

72. D. M. Uhl, 2d, ... $6 00
119. J. Hopson, Detroit, 3d, ... 4 00

Heifers, one year old.

73. D. M. Uhl, 1st prem., ... 5 00
156. Silas Sly & Son, 2d, ... 4 00
118. J. S. Tibbitts, 3d, ... 2 00

Heifer Calves.

90. H. E. DeGarmo, 1st prem, ... 4 00
83. D. C. Blair, 2d, ... 2 00

There was also on exhibition a pair of twin Heifers, one year old belonging to L. Leach, Marshall, which your Committee deem worthy of a Discretionary Premium.

On behalf of the Committee.

H. O. HANFORD,
Chairman.

CLASS VII.

Native Cattle.

The Committee on Native Cattle, having performed the duties assigned them, award the following Premiums:

Cows, five years old or over.

30. J. H. Button, Farmington, 1st prem., ... $10 00
21. Joseph Tireman, Detroit, 2d, ... 8 00
22. " " " 3d, ... 6 00

Heifers, two years old.

23. Joseph Tireman, 1st prem., ... 7 00
24. " " 2d, ... 5 00

Heifers, one year old.

92. H. E. Degarmo, Ypsilanti, 1st prem., ... 5 00

J. D. YERKES,
H. H. NORTON,
J. BAILEY,
Committee.

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CLASSES VIII AND IX.

Working Oxen and Steers.

The Committee on Working Oxen and Steers report that they have awarded the following Premiums:

Working Oxen.

Entry.		
162.	James Taylor, Kalamazoo, 1st prem.,	$10 00
77.	A. D. Power, Farmington, 2d,	8 00
3.	B. Dewey, Troy, 3d,	6 00

Steers.

26.	J. H. Button, Farmington, steers, 4 years old, 1st prem.,	10 00
27.	" " " " " " 2d,	8 00
168.	S. S. Stuart, Plymouth, steers, 3 years old, 1st prem.,	9 00
28.	J. H. Button, Farmington, steers, 2 years old, 1st prem.,	6 00

W. S. COONLEY,
JUSTIN KELLOGG,
GILBERT GAGE,
Committee.

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CLASSES X AND XI.

Fat Cattle.

The Committee on Classes 10 and 11, Fat Cattle, make the following awards:

160.	James Taylor, Kalamazoo, fat ox, 1st prem.,	$ 5 00
159.	" " " pair oxen, 1st prem.,	10 00
152.	" " " single steer, 1st prem.,	5 00
165.	" " " single steer, 2d,	4 00
164.	Silas Sly, Plymouth, pair oxen, 2d prem.,	8 00

JOHN ALLEN,
B. J. THURBER,
L. HOARD,
Committee.

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CLASS XII.

Milch Cows.

Entry.

The Committee on Milch Cows award as follows:

144. James Smith, Greenfield, grade, 8 years old, 1st prem.,..$10 00
146. " " native, 8 " 2d " .. 8 00
145. " " grade, 8 " 3d " .. 6 00

WARREN GILBERT,
C. FULLER,
Committe.

CLASS XIII.

Foreign Cattle.

The Committee on Foreign Cattle report as follows:

Short Horns.—None worthy of a premium.

Devons.—The Committee recommend a Diploma to John A. Goose Chatham, C. W., for a Devon Bull, 2 years old, No. 166.

Herefords and Ayrshires.—None offered.

S. P. WORMLEY,
WINFIELD SCOTT,
JOHN CLARK,
Committee.

DIVISION A.—HORSES.

CLASS XIV.

Horses for All Work.

The Committee on Horses for all work would respectfully report that they have carefully examined all the Horses entered in their Class. Of Stallions for all work, four years old or over, there was a splendid display, from which the Committee found it exceedingly difficult to make a choice.

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Your Committee has aimed to award premiums to those Horses which combined, in the greatest degree, the five most essential points which constitute a first-class Horse for all work, viz: symmetry, action, style, strength and proportion. In accordance with these views, your Committee award as follows:

Stallions, four years old, or over.

Entry.		
224.	A. Healy, Kalamazoo, Black Hawk Beauty, 1st prem.,	$15 00
73.	D. Solis, St. Clair, "Crown Point Black Hawk," 2d "	10 00
189.	S. T. Turner, Ypsilanti, "Washtenaw Chief," 3d "	8 00

Stallions, three years old.

36.	R. A. Aldrich, Parma, "Gray Norman," 1st prem.,	10 06
191.	J. B. Starkweather, Ypsilanti, "Colonel," 2d "	8 00
28.	J. H. Cornell, Kalamazoo, "Young America," 3d "	5 00

Stallions, two years old.

268.	H. A Flint, Novi, 1st prem.,	5 00
292.	A. Blakesley, Albion, 2d "	7 00

Stallions, one year old.

198.	J. D. Perry, Redford, 1st prem.,	8 00

Brood Mares, four years old and over.

14.	F. E. Eldred, Detroit, "Ada," 1st prem.,	12 00
222.	F. Ransom, Kalamazoo, "Lady," 2d "	10 00
1.	A. Fisher, Detroit, "Sleepy Jane," 3d "	8 00

Brood Mares, three years old.

190.	S. T. Turner, "Fannie," 1st prem.,	9 00

Brood Mares, two years old.

285.	H. Van Deusen, Novi, 1st prem.,	8 00
139.	D. M. Uhl, "Gazelle," 2d "	6 00
228.	J. Chase, Royal Oak, 3d "	4 00

Sucking Mare Colt.

223.	F. Ransom, Kalamazoo, 1st prem.,	5 00
160.	A. D. Power, Farmington, 2d,	3 00

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Sucking Stallion Colt.

Entry.
129. E. Perkins, Birmingham, 1st prem., ... $5 00
165. S. C. Brown, Farmington, 2d, ... 3 00

JAMES ELIZBE,
W. B. LATHROP,
J. F. HUMPHREY,
JOHN CLARKE,
P. LYNDON,
Committee.

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CLASS XV.

Blood Horses.

The Committee on Blood Horses would respectfully submit the following report:

Stallions.

180. Th. Williams, Dexter, "Stone Plover," 1st prem., ... $15 00
134. C. W. Green, "Farmingtonian," 2d, ... 10 00
207. J. Hamilton, Flint, "Grey Eagle," 1st last year, ... Diploma.

Mares.

216. Wm. Johnson, Marshall, "Abbey Kelley," 1st prem. 12 00
12. F. E. Eldred, Detroit, "Lady Jane," 2d, ... 10 00

H. T. W. PUTNAM,
E. H. DAVIS,
G. W. PHILLIPS,
J. ANDREWS,
Committee.

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CLASS XVI.

Draught Horses.

The Committee on Classes 16 and 20, make the following awards on Draught Horses:

Stallions, four years old and over.

120. E. W Rising, Richfield, "Duke of York," 1st prem., ... $10 00
25. Th. Cox, Detroit, "Sampson," 2d, ... 8 00

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Stallions, two years old.

Entry.

119. C. Carlo, Mt. Clemens, "Tom," 2d prem., ... $6 00

Stallions, one year old.

142. H. A. Snyder, Detroit, 2d prem., ... 5 00

Mares.

135. J. Simmons, Farmington, Brood Mare, "Nell," 7 years, 1st, 9 00
141. H. A. Snyder, Detroit, 1 year old, 1st prem., ... 6 00

Mare Colts.

136. J. Simmons, Farmington, "Jessie," 1st prem., ... 4 00

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CLASS XX.

Jacks and Mules.

58. F. W. Backus, Detroit, a jack, 4 years old, ... $10 00
81. Dr. White, Detroit, jennet, 6 years old, ... 6 00

F. W. Backus exhibited a jennet, and C. Crawford, of Commerce, a mule, two years old, a fine specimen.

C. A. GREEN,
C. H. JOHNSON,
Committee.

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CLASS XVII.

Trotting Stallions.

The Committee make the following awards:

Stallions, five years old.

201. A. L. Thayer, Jackson, "Black Hawk," 1st prem., ... Silver Cup.
16. J. Trudeau, Niles, "Fox Hunter," 2d, ... $10 00
83. J. Starkweather, Ypsilanti, "Sevastopol," 3d, ... 8 00

Stallions, four years old.

280. F. McHardy, Almont, "Tryon Black Hawk," 1st prem., .. 10 00

Stallions, three years old.

47. T. L. Campau, Detroit, "Hercules," 1st prem., ... 8 00
234. J. P. Hawley, Pontiac, "Young Star," 2d, ... 6 00

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Single Trotting Horses, five years old.

Entry.

41. J. Alexander, Ypsilanti, "Jemmy Poker," 1st prem.,...Diploma.
133. P. Mitchell, Marshall, "Billy," 2d,.....Transactions.

Matched Trotters, five years old or over.

304. C. Tery, Pontiac, best matched horses, 7 years,.....Diploma.

Single Trotters, four years old.

103. C. Green, Troy, Sultan gelding, Jim Clarke,.....Diploma.
84. J. Starkweather, Ypsilanti, Lady Florence,.....Discretionary.

Wm. Cole, for Sailor boy, a discretionary premium of $10.

The Committee recommend a discretionary premium of Diploma, to E. N. Wilcox, on his Abdallah stallion "Roebuck," two years old, there being no premium given to two year olds in this Class.

On behalf of the Committee,

S. LARNED,
Chairman.

CLASS XVIII.

Matched and Single Horses.

The undersigned Committee on Matched and Single Horses, would respectfully report, that they have discharged the duties assigned them, and have awarded the following premiums:

Matched Carriage Horses.

153. R. A. Facey, Marshall, 1st prem.,..... $15 00
22. A. Ferguson, Kalamazoo, 2d,..... 10 00

Matched Horses for all Work.

137. Wm. Dingman, Farmington, 1st prem.,..... 12 00
193. J. S. Tibbits, Plymouth, 2d,..... 10 00

Matched Draught Horses.

270. A. E. Pardee, Plymouth, 1st prem.,..... 12 00
35. A. E. Pearsall, Big Beaver, 2d,..... 10 00

Single Carriage Horses, four years old.

19. J. Croul, Detroit, 1st prem.,..... 8 00
106. H. Bloombergh, Birmingham, 2d,..... 6 00

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Single Carriage Horses, three years old.

Entry.

108. C. G. Blindbury, Detroit, 1st prem., ... $6 00

The Committee awards a premium of $6 to P. Mitchell, of Marshall, for his gelding, 6 years old, No. 133.

And also a discretionary premium to No. 26, Thomas Cox, of Detroit, for a Single Draught Horse, there being no premiums offered for this Class.

M. E. CROFOOT,
JAMES PATTON,
Z. H. HALLECK,
JOSEPH BULLOCK,
Committee.

CLASS XIX.

Foreign Horses.

The Committee on Foreign Horses make the following report, and awards:

195. S. T. Turner, Ypsilanti, Morgan Black Hawk stallion, Washtenaw Chief, 8 years old, for all work, ... Diploma.

51. B. J. Bidwell, Tecumseh, Morgan Stallion, Bussorah blood, seven years old, ... Diploma.

120. E. W. Rising, Richfield, Sampson stallion, Duke of York, 7 years old, draught, ... Diploma.

194. S. T. Turner, Ypsilanti, Black Hawk mare, Fanny, three years old, ... Diploma.

W. JOHNSON,
J. M. PARISH,
W. H. HAWKINS,
Committee.

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DIVISION B.—SHEEP, SWINE AND POULTRY.

CLASS I.

Spanish Merinos.

The Committee on Spanish Merino Sheep would respectfully report, that the competition in this Class was light, there being but few exhibitors. The animals, however, were superior, and fully entitled to the premiums. Those shown by Mr. Peckham, of Parma, Jackson county, came fully up to our standard of excellence in this most valuable animal; and it was evident that no cross out of this class of Sheep had crept in to lessen their value. Messrs. Gale and Goodspeed, of Ypsilanti, also exhibited some good Sheep. The reputation of the former as a skillful breeder has long been established.

The Committee have awarded the following premiums:

Entry.		
78.	B. Peckham, Parma, best three year old buck, Diploma and	$5 00
14.	G. W. Gale, Ypsilanti, 2d best,	5 00
49.	N. S. Schuyler, Birmingham, 3d best,	2 00
15.	G. W. Gale, best 2 year old buck, Diploma and	5 00
94.	B. Peckham, Parma, 2d best,	5 00
91.	" " " 2d prem.,	2 00
92.	" " " best buck 1 year old, Diploma and	4 00
93.	" " " 2d best,	4 00
119.	T. B. Goodspeed, Ypsilanti, 3d best,	2 00
83.	B. Peckham, best five buck lambs, Diploma and	4 00
90.	" " 2d best,	4 00
118.	T. B. Goodspeed, 3d best,	2 00
79.	B. Peckham, 5 ewes 3 years old, 1st prem.,	8 00
86.	" " " " 2d prem.,	6 00
17.	G. W. Gale, " " 3d prem.,	4 00
80.	B. Peckham, 5 ewes 2 years old, 1st prem.,	6 00
87.	" " " " 2d prem.,	5 00
18.	G. W. Gale, " " 3d prem.,	4 00
91.	B. Beckham, 5 ewes 1 year old, 1st prem.,	6 00
88.	" " " " 2d prem.,	5 00
19.	G. W. Gale, " " 3d prem.,	4 00

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Entry.			
82.	B. Peckham, 5 ewe lambs,	1st prem.,	$6 00
89.	" " "	2d prem.,	5 00
117.	T. B. Goodspeed, "	3d prem.,	4 00

All of which is respectfully submitted.

J. M. STARKWEATHER,
M. H. NORTON,
Committee.

CLASS II.

French Merinos.

The Committee on French Merinos, having carefully examined all the Sheep in that Class on exhibition, respectfully submit the following report and awards:

28.	W. S. Beach, Farmington, best buck 4 years old, 1st prem., Diploma and	$5 00
31.	Ira H. Butterfield, Utica, best buck 2 years old, 1st prem., Diploma and	5 00
45.	N. S. Schuyler, Birmingham, 2d best,	5 00
151.	Ira H. Butterfield, 5 ewes 3 years old, 1st prem.,	8 00
152.	" " " " " 2d "	6 00
33.	" " " " " 3d "	4 00
155.	" " 5 ewes 2 years old, 1st prem.,	6 00
154.	" " " " " 2d "	5 00
35.	" " 5 ewes 1 year old, 1st prem.,	6 00
34.	" " " " " 2d "	5 00
36.	" " 5 ewe lambs, 1st prem.,	6 00
46.	N. S. Schuyler, best buck 1 year old, 1st prem., Diploma and	4 00
32.	I. H. Butterfield, 5 buck lambs, 1st prem., Diploma and	4 00

A. W. HOLMES,
H. H. NORTON,
NATHAN SLY,
Committee.

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CLASS III.

Saxon and Silesian Sheep.

The Committee on Saxon and Silesian Sheep beg leave to report the following awards:

Entry.

160. J. P. Gillett, Manchester, Saxon buck, 3 years, 1st prem., Diploma and $5 00

161. J. P. Gillett, Manchester, Saxon buck, 2 years, 1st prem., Diploma and 5 00

162. J. P. Gillett, Manchester, Silesian buck, 1 year, 1st prem., Diploma and 4 00

163. J. P. Gillett, Manchester, Silesian buck, 1 year, 2d prem., 4 00

164. " " " 5 Silesian and Saxon buck lambs, 1st prem., Diploma and 4 00

165. J. P. Gillett, Manchester, 5 Saxon ewes, 3 years, 1st prem., 8 00

166. " " " " " 2 years, 1st prem., 6 00

167. " " " 5 Saxon and Silesian ewes, 1 year, 1st prem., ... 6 00

168. J. P. Gillett, Manchester, 5 Saxon and Silesian ewe lambs, 1st prem., ... 6 00

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CLASS IV.

Southdowns and their grades.

The Committee have to report that but few animals were presented under this Class, but those we had occasion to examine were good. The following premiums were awarded:

122. Wm. Whitfield, Waterford, Southdown buck, 4 years, 1st prem., Diploma and $5 00

123. Wm. Whitfield, Waterford, Southdown buck, 4 years old, 2d prem., ... 5 00

125. Wm. Whitfield, Waterford, Southdown buck, 2 years, 1st prem., Diploma and 5 00

130. Daniel Whitfield, Pontiac, Southdown buck, 2 years old, 2d prem., ... 5 00

129. Daniel Whitfield, Pontiac, 5 Southdown buck lambs, 1st prem., Diploma and 4 00

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Entry.

127. Wm. Whitfield, Waterford, 5 Southdown buck lambs, 2d prem., ... $4 00

128. Daniel Whitfield, Pontiac, 5 Southdown ewes, 3 years old, 1st prem., ... 8 00

For the Committee,

ALONZO SESSIONS,
Chairman.

CLASS V.

Long Wooled Sheep and their grades.

24. Joseph Tireman, Detroit, grade buck, 1 year old, 1st prem., Diploma and $4 00

2. Joseph Tireman, Detroit, 5 buck lambs, 5 months, 1st prem., Diploma and 4 00

7. Joseph Tireman, Detroit, 5 ewes, 3 years, 1st prem., ... 8 00

1. " " " 5 ewe lambs, 5 mo., 1st prem., 6 00

S. M. PEARSALL,
SAMUEL MOWRY,
JOHN KEAGLE,
Committee.

CLASS VI.

Cross of Blood, and grade Spanish, French, Silesian and Saxon Sheep.

The Committee have duly examined all the Sheep in Class 6, and in accordance with their best judgment, have awarded premiums as follows:

20. G. W. Gale, Ypsilanti, French and Spanish buck, 3 years, 1st prem., Diploma and $5 00

52. N. S. Schuyler, Birmingham, grade French Buck, 3 years, 2d prem., ... 5 00

21. G. W. Gale, Ypsilanti, French and Spanish buck, 2 years old, 1st prem., Diploma and 5 00

48. N. S. Schuyler, Birmingham, French and Spanish buck, 2 years, 2d prem., ... 5 00

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Entry.

29. Wm. S. Beach, Farmington, French and Spanish buck, 1 year, 1st prem., Diploma and $4 00
22. G. W. Gale, Ypsilanti, French and Spanish buck, 1 year, 2d prem., ... 4 00
41. I. H. Butterfield, Utica, 5 French and Spanish buck lambs, 5 months old, 1st prem., Diploma and 4 00
42. I. H. Butterfield, Utica, 5 French and Spanish buck lambs, 5 months old, 2d prem., ... 4 00
61. N. S. Schuyler, Birmingham, 5 grade French ewes, 3 years old, 1st prem., ... 8 00
62. N. S. Schuyler, Birmingham, 5 grade Silesian ewes, 3 years old, 2d prem., ... 6 00
30. W. S. Beach, Farmington, 5 French and Spanish ewes, 1 year old, 1st prem., ... 6 00
37. I. H. Butterfield, Utica, 5 French and Spanish ewes, 1 year old, 2d prem., ... 5 00
114. T. B. Goodspeed, Ypsilanti, 5 cross blood, French and Spanish ewes, 3d prem., ... 4 00
40. I. H. Butterfield, Utica, 5 French and Spanish ewe lambs, 5 months old, 1st prem., ... 6 00
116. T. B. Goodspeed, Ypsilanti, 5 cross blood ewe lambs, 5 months old, 2d premium, ... 5 00
39. I. H. Butterfield, Utica, 5 French and Spanish ewe lambs, 3d premium. 4 00

For the Committee,

EBER DURHAM,
Chairman.

CLASS VII AND VIII.

Fat Sheep and Foreign Sheep.

The Committee awarded no premiums on Fat Sheep. On Foreign Sheep they awarded as follows:

Leicesters.

94. James Smith, Chatham, C. W., buck 1 year old, ... Diploma.
95. " " " " buck 2 years old, ... Diploma.

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Entry.

133. John Chamberlain, Avon, Ohio, 5 ewes 2 years old,...Diploma.
137. " " " " 5 ewe lambs,.....Diploma.
135. " " " " 5 ewes 1 year old,.....Diploma.
138. " " " " 5 buck lambs,.....Diploma.
140. Samuel Toms, Elyria, Ohio, buck 3 years old,.....Diploma.

Southdowns.

142. Samuel Toms, Elyria, Ohio, buck 2 years old,.....Diploma.
143. " " " " buck 1 year old,.....Diploma

On behalf of the Committee,

ARTHUR D. POWER,
Chairman.

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CLASS IX.

Swine.

The Committee on Swine, award the following premiums:

71. J. S. Tibbits, Plymouth, 4 Essex pigs, 5 months old, 1st prem., ... $5 00
68. J. S. Tibbits, Plymouth, Suffolk sow, 1 year old, 1st prem., ... 5 00
67. J. S. Tibbits, Plymouth, Suffolk sow, 3 years old, 2d prem., ... 3 00
70. J. S. Tibbits, Plymouth, 4 Suffolk pigs, 6 months old, 1st prem., ... 5 00
74. J. S. Tibbits, Plymouth, 8 Suffolk pigs, 8 weeks old, 2d prem., ... 3 00
26. George De Baptist, Detroit, Byfield sow, 17 months old, 1st prem., ... 5 00
158. E. Hamilton, Royal Oak, Suffolk grade sow, 1 year old, 1st prem., ... 5 00
75. J. S. Tibbits, Plymouth, grade sow, 1 year old, 2d prem., 3 00
159. E. Hamilton, Royal Oak, 6 Suffolk grade pigs, 4 months old, 1st prem., ... 5 00
76. J. S. Tibbits, Plymouth, 6 grade pigs, 7 weeks old, 2d prem., ... 3 00

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Entry.

72. J. S. Tibbits, Plymouth, 2 Suffolk and Essex pigs, 5 months old, ... $5 00

147. John G. Shoards, Norwalk Ohio, 5 Suffolk pigs, 2 months old.

148. Stephen Boult, Norwalk, Ohio, Suffolk boar, 1 year old.

175. A. C. Harris, Toledo, Ohio, 5 Suffolk pigs.

The animals numbered 147 and 148, were number one specimens, and 175 was extra. The Committee would respectfully recommend to special notice the hogs exhibited by A. C. Harris, of Toledo, Ohio, as superior to any others upon the grounds. The Committee regret to state that the boar exhibited by H. A. Snyder, of Detroit, was not a Suffolk, but a grade animal, and therefore not entitled to a premium.

THOMAS M'CLUMPHA,
J. P. ALGER,
A. C. WALKER,
Committee.

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CLASS X.

Poultry.

The Committee on Poultry award as follows:

110. E. H. Cressy, Royal Oak, best mixed breed, Black China and Brahma Pootra, 1st prem., ... $5 00

214. M. Fisher, Grosse Point, cross breed, 2d prem., ... 3 00

101. E. H. Cressy, Royal Oak, best quality black Spanish, 1st premium, ... 5 00

102. E. H. Cressy, Royal Oak, 2d best quality Brahma Pootra, 2d prem., ... 3 00

98. Simon Poupard, Detroit, 4 black English geese, 1st prem., 3 00

66. Francis Leslie, Dearborn, 3 geese, 2d prem., ... 2 00

99. David George, Detroit, best ducks, ... 3 00

65. Francis Leslie, Dearborn, turkeys, 1st prem., ... 3 00

131. John Hoyer, Detroit, wild turkeys, 2d prem., ... 2 00

One coop of Golden and Silver Pheasants we recommend to the special consideration of the Executive Committee; also, one coop of Japan fowls, No. 12, we deem worthy of consideration, but, under the rules,

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we can award no premium; also, one coop of Bantam fowls, numbered 173.

We are of the opinion, that if the list were extended, without increasing the amount of money awarded to this Class, it would add much to the interest of the exhibition, and give better satisfaction to exhibitors.

For the Committee,

E. H. BRISTOL,
Chairman.

DIVISION C.—FARM IMPLEMENTS.

CLASS I.

The Committee on Farm Implements, Class 1, make the following report:

Entry.		
89.	A. H. Ross, Battle Creek, Eagle Fanning-mill, Diploma and	$3 00
14.	J. Cullen, Detroit, Buffalo wagon,	Diploma.
131.	Austin & Tomlinson, Jackson, farm wagon, 1st premium, Diploma and	6 00
81.	Joseph Waggoner, farm wagon, 2d prem.,	6 00
34.	F. Traxler, Tecumseh, stump-puller, 1st prem., Diploma and	3 00
38.	D. O. & W. S. Penfield, Detroit, ox-yoke, 1st prem.,	2 00
100.	G. H. Felt, Brooklyn, cornstalk cutter, 1st prem.,	3 00
111.	C. McKenzie, Adrian, straw and stalk cutter, 1st prem.,	3 00

M. ROGERS,
G. H. SHERMAN,
—— MARKHAM,
Committee.

CLASS II.

The Committee on Class 2, Farm Implements, award premiums as follows:

32.	D. A. Smith & Son, Detroit, wire-bound brooms, 1st prem.,	$2 00

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Entry.

39. D. O. & W. S. Penfield, Detroit, hand-rakes, 1st prem., .. $2 00
40. " " " " Morgan grain cradle, 1st premium, ... 2 00
62. Thomas A. Parker, Detroit, 1 self-acting cheesepress, G. D. Hamson's patent, ... 2 00

ALANSON PEARSALL,
ALPHEUS MILLSPAUGH,
GEORGE BLUMLEY,
Committee.

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CLASS III.

The Committee on Farm Implements, Class 3, would respectfully report that they have carefully examined all the articles presented for their consideration, and make the following awards:

1. Abram Fisher, Redford, horse-power pitchfork, ... Diploma.
2. I. J. Merritt, Detroit, tubar auger, Diploma and $5 00
7. Augustus Day, Detroit, Speed, Bailey & Days' shingle-machine, for riving, jointing and planing shingles, Diploma and 10 00

The work performed by this machine is excellent.

8. Augustus Day, portable steam engine and boiler, 1st premium, ... 10 00
12. S. B. Shaffer, Plymouth, portable cider mill, 1st premium, Diploma and 5 00
17. P. Hamilton, Detroit, Stevens' & Kidgers' shingle-machine, ... Medal.
18. P. Hamilton, Malone's corn-planter, ... Diploma.
22. Sargent & Foster, Shelburn Falls, Mass., gimblets and bits, ... Diploma.
20. W. Cady, Cleveland, Ohio, portable saw-mill, ... Diploma.
23. H. Benedict, Detroit, Haynes' broad cast seed sower, Diploma and 3 00
24. P. F. Thurbur, Pontiac, wheelwright machine, ... Diploma.
26. A. Hosmer, Marshall, grain drill, ... 5 00
27. John Edgar, Perrysburgh, Ohio, patent head-blocks, ... Diploma.
28. Silas Pierce, Grand Rapids, patent blinds, ... Diploma.

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Entry.

35. S. Eckhardt, Markham, C. W., potato and corn planter, Diploma.
36. D. O. & W. S. Penfield, Ketchum's mower and reaper, 1st premium, $10 00
45. D. M. Frost & Co., Sawyer's hoop machine, Diploma.
55. H. T. Stannard, Wayne, improved plane, Diploma.
56. Wm. Brown, Battle Creek, thresher and separator, 1st premium, Diploma and 10 00
57. Wm. Brown, horse-power, Diploma and 5 00
58. Wm. Brown, attached geared jack, Diploma.
This is an invention of merit and usefulness.
60. Thos. A. Parker, Detroit, Seymour & Morgans' self-raking reaper, Diploma and 5 00
61. Thos. A. Parker, Joices' patent star-mill corn and cob-crusher, Diploma.
67. Thos. A. Parker, lever horse-power, Diploma.
9. J. C. Parsons, Detroit, Young America corn sheller, Diploma.
68. Nelson & Davis, Hudson, checkrow corn planter, Diploma and 5 00
69. J. V. Jenkins, Jackson, sheep shearing machine, Diploma.
70. G. Smith, Birmingham, cross-cut sawing machine, 5 00
80. W. Steele & Co., agents for J. M. Beard, Wheeling, Va., foot tennon-machine, Diploma.
76. R. Hazen, device for upsetting tires, Diploma.
83. H. F. Parish, Detroit, Scott shingle machine, Diploma.
87. T. J. Alexander, Westerville, Ohio, lath saw, Diploma.
88. " " lath and broom handle sawing machine, Diploma.
90. C. Blakesley, Ashtabula, Ohio, road scraper, Diploma.
92. S. P. Cady, Kalamazoo, Steadmans' seed picker, Diploma.
93. John Daines, Birmingham, drain tile, 1st prem., 3 00
94. " " American drain tile machine, Diploma and 5 00
99. G. H. Felt, Brooklyn, corn sheller, Diploma and 3 00
98. C. Howell, Cleveland, Ohio, iron mower, 2d premium, Diploma and 5 00
101. Wm. Steele & Co., Wheeling, Va., morticing machine, Diploma and 5 00
104. M. Haven, Albion, corn drill and compost depositor, Diploma and 5 00

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Entry.

107. C. Phillips, Detroit, machine for loading railroad cars,.. Diploma.
112. C. McKenzie, Adrian, corn planting hoe,..... Diploma.
M. B. Riggs, New York, Allen's mowing machine,..... Diploma.

On behalf of the Committee,

WM. TAFFT,
Chairman.

CLASS IV.

The Committee on Class 4, make the following report and awards:

48. G. Dodge, Kalamazoo, sod plow for light soil, Diploma and $3 00
47. " " sod plow for deep plowing on stiff soils, 1st prem., Diploma and..... 3 00
51. G. Dodge, double plow, 1st prem.,..... 3 00
52. " " corn cultivator, 1st prem., Diploma and..... 3 00

The above named articles are, in the estimation of the Committee, articles of superior merit.

15. T. G. Coggeshall, Taunton, Mass., Rich's iron-beam plow, 2d prem.,..... 3 00
103. F. Van Doren, Adrian, reversable two-wheeled cultivator, Diploma and..... 3 00
110. C. M. McKenzie, Anderson's harrow, 1st prem.,..... 3 00

There was also exhibited in this Class, three gang-plows, of different patents, for which there is no premium offered; one by G. Dodge, of Kalamazoo, one by Stephen Bennett, of Commerce, Oakland county, and one by D. O. & W. S. Penfield, of Detroit, which the Committee think are articles of superior merit, and for which we think a premium should have been offered by the Society.

All which is respectfully submitted,

J. H. BULLEN,
Chairman.

DIVISION D.—BUTTER, CHEESE, SUGAR AND HONEY.

The Committee on Butter, Cheese, Sugar and Honey, report that the entries in this Division were very few; they were, however, of superior quality, and it was extremely difficult to determine their respec-

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tive merits; but after a careful examination the Committee have made the following awards:

Entry.

21. James Smith, Greenfield, 15 lbs. Butter made in June, 1st prem. Diploma and $7 00
23. S. S. Stewart, Livonia, 15 lbs. Butter made in June, 2d prem, ... 5 00
9. Mrs. H. E. DeGarmo, 15 lbs. Butter made in June, 3d premium, ... 3 00
20. James Smith, Greenfield, 15 lbs. Butter made at any time, 1st prem., Diploma and 7 00
2. Joseph Tireman, 15 lbs. of Butter made at any time, 2d premium, ... 5 00
10. Mrs. H. E. DeGarmo, 15 lbs. of Butter made at any time, 3d prem., ... 3 00
14. J. S. Tibbitts, Plymouth, Cheese, one year old, 1st prem., Diploma and 7 00
15. C. M. Bowen, Lima, old Cheese, 2d prem., ... 5 00
3. R. R. Briggs, Romeo, old Cheese, 3d prem., ... 3 00
17. N. Lapham, Farmington, new Cheese, 1st premium, Diploma and 5 00
16. C. M. Bowen, Lima, new Cheese, 2d prem., ... 4 00
5. R. R. Briggs, new Cheese, 3d prem., ... 2 00
4. R. R. Briggs, Sage Cheese, 1st prem., ... 5 00
18. J. S. Tibbitts, Sage Cheese, 2d prem., ... 3 00
6. J. Simmons, Farmington, 10 lbs. Maple Sugar, 1st premium, ... 3 00
11. Mrs. Francis Leslie, Dearborn, 10 lbs. Maple Sugar, 2d prem., ... 2 00
22. J. B. Bromfield, Plymouth, 5 lbs. Honey, 1st prem., ... 5 00

J. M. HOAG,
GEORGE WILBUR,
MRS. WM. TAFFT,
MRS. CHILDS,
MRS. PHILBRIC,
Committee.

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DIVISION E.—DOMESTIC MANUFACTURES.

CLASS I.

Home Made.

The Committee on Domestic Manufactures, Class 1, award as follows:

Entry.		
29.	James Bayley, Big Beaver, ten yards Cloth, 1st prem.,	$5 00
157.	Mrs. A. G. Becker, Redford, ten yards Cloth, 2d prem.,	4 00
32.	Mrs. S. A. Pringle, Detroit, embroidered Shirts,	Diploma.
33.	Mrs. S. A. Pringle, men's embroidered Scarfs,	Diploma.
109.	Mrs. W. A. Davidson, Troy, one pound Woolen Yarn, 1st prem.,	3 00
107.	Mrs. W. S. Beach, Farmington, one pound Woolen Yarn, 2d prem.,	1 00
142.	Mrs. H. Phinney, Redford, Rag Carpet, 1st prem.,	3 00
151.	Mrs. A. G. Becker, Redford, patch-work Quilt, 1st premium,	4 00
137.	Mrs. McConnell, St. Clair, patch-work Quilt, 2d premium,	3 00
83.	Mrs. J. B. Starring, patch-work Quilt, 3d prem.,	2 00
75.	Miss C. Chipman, knit Coverlet,	4 00
154.	Mrs. A. G. Becker, one pair Woolen Hose, 1st prem.,	2 00
30.	Mrs. James Bayley, Big Beaver, Woolen Hose, 2d premium,	1 00
84.	Mrs. J. B. Starring, Woolen Socks, 1st prem.,	2 00
155.	Mrs. A. G. Becker, Cotton Hose, 1st prem.,	2 00
159.	Mrs. M. Castle, Birmingham, Woolen Blankets, 1st premium,	5 00
158.	Mrs. M. Castle, Birmingham, ten yards Woolen Carpet, 1st prem.,	5 00
166.	Mrs. F. Leslie, Dearborn, Woolen Blankets, 2d prem.,	4 00
160.	Mrs. M. Castle, Birmingham, Counterpane, 2d prem.,	3 00
162.	Mrs. M. Castle, Woolen Mittens, 2d prem.,	1 00

For the Committee.

H. C. LEWIS,
Chairman.

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CLASS II.

Factory Made.

The Committee on Domestic Manufactures—Class 2—award as follows:

Entry.

8. L. Beecher & Co., Detroit, 2 pieces Velvet Carpeting,..Diploma.
9. " " " 4 Mosaic Rugs,.....Diploma.
12. " " " 1 Velvet Piano Cover,.....Diploma.
13. " " " 1 Embroidered Cover,.....Diploma.
20. " " " 2 pieces Wilton Carpet,.....Diploma.
22. " " " 2 pieces Wilton Stair Carpeting,.....Diploma.
25. L. Beecher & Co., 2 pieces Ingrain Carpet,.....Diploma.
26. " " 2 pieces Oil Cloth,.....Diploma.
38. Nall, Duncklee & Co., Detroit, 3 pieces Velvet Carpet, Diploma and..... $5 00
39. Nall, Duncklee & Co., 4 pieces Brussels Carpet, Diploma and..... 5 00
43. Nall, Duncklee & Co., 1 piece Masonic Carpet, Diploma and..... 5 00
44. Nall, Duncklee & Co., 1 Table Cover,.....Diploma.
46. " " 3 Skeepskin Mats,.....Diploma.
51. " " 1 pair Lace Curtains,.....Diploma.
53. " " 1 pair Muslin Curtains,.....Diploma.
54. " " 1 piece English Carpeting,.....Diploma.
——. L. Beecher & Co., set Delaine Curtains and Cornice,..Diploma.
91. D. T. Barrett, Detroit, 2 cases Shirts,.....Diploma.
130. Ira Green, Ann Arbor, 10 yards White Flannel,.....Diploma.
133. " " 10 lbs. three-thread White Woolen Yarn...Diploma.
139. John Allen, Plymouth, Cotton and Wool Coverlet,....Diploma.

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CLASS III.

The Committee on Domestic Manufactures, Class 3, make the following awards:

73. Lyman Baldwin, Detroit, 1 set Carriage Harness, Diploma and..... $3 00

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Entry.

74. Lyman Baldwin, Detroit, 1 set buggy harness, Diploma and $5 00
85. G. E. Curtiss, Detroit, Shoe Lasts, 1st prem., ... 2 00
86. " " " Shoe Trees, 1st prem., ... Diploma.
87. " " " Boot Stretcher, 1st prem., ... Diploma.
88. A. Goodman & Co., Troy, pair Sewed Boots, ... 3 00
89. " " " pair Pegged Boots, ... 2 00
105. Geo. Winter, Detroit, case of Silk and Fur Hats, 1st prem., Diploma and 2 00
110. J. C. Hixon, Battle Creek, Commercial Overcoat, 1st prem., Diploma and 4 00
136. S. Guiterman, Ann Arbor, Dress-coat, 1st prem., ... 3 00
111. J. C. Hixon, Dress-coat, 2d prem., ... 2 00
112. " " pair Pants, 1st prem., ... 3 00
138. Mrs. J. B. Starring, Embroidered Sllk Vest, 2d prem., .. 1 00
143. James McGrath, Detroit, Frock-coat, ... 3 00
149. Jas. Patton, Dowagiac, Embroidered Silk Vest, prem., ... 2 00

On behalf of the Committee,

NATHAN PARKHURST,
Chairman.

CLASS IV.

The Committee on Domestic Manufactures, Class 4, award as follows:

3. Cabinet Makers' Asssociation, Detroit, one Side Board, Diploma and $5 00
4. Henry Weber, Detroit, 2 Rosewood Easy Chairs, 1st prem., ... 2 00
5. Henry Weber, Detroit, 1 Bedroom set, ... Diploma.
6. Charles Scaulenburg, Detroit, Billiard Table, ... Diploma.
31. James Croul, Detroit, 1 Horse Carriage, (eastern,) ..... Diploma.
63. D. & J. Hickey, Detroit, 1 common Horse Shoe on hoof, 1st prem., ... 2 00
69. B. B. & W. R. Noyes, Detroit, Show Case, ... Diploma.
77. John Paton, Detroit, 2 Horse Carriage, 1st prem., Diploma and 10 00

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Entry.

78. John Paton, Barouche, ... Diploma.
79. John Paton, Shifting Top Buggy, 1st prem., Diploma and $8 00
49. Ostrander & Shutts, Ypsilanti, Light Cutter, ... Diploma.
27. T. S. Balsley, Detroit, specimen Stone Ware, ... Diploma.
103. H. H. Dean, Kalamazoo, Wagon Hub, ... Diploma.
101. P. Michel, Marshall, 1 Buggy Wagon, ... Diploma.
104. H. H. Dean, Kalamazoo, Wagon and Carriage Hubs, with Hubstands, ... Diploma.
113. C. S. Crittenden, Kalamazoo, two-seat extension Covered Carriage, 2d prem., ... 6 00
114. C. S. Crittenden, Kalamazoo, single seat Top Buggy, 2d prem., ... 5 00
115. C. S. Crittenden, Kalamazoo, one horse Open Buggy, 1st prem., ... 4 00
119. W. H. Teft & Co., Detroit, 1 Stuart Stove, ... Diploma.
124. " " " 1 Floral Stove, ... Diploma.
141. L. D. Griggs, Detroit, Wheeler & Wilson's Sewing Machine, ... Diploma.
145. C. P. Pindad, Detroit, one double-spring Invalid Bed, .. Diploma.
147. James Carson, Rochester, N. Y., 3 Open Carriages, ... Diploma.
148. B. J. Church, Bellville, Clark Alvords' patent Brick Moulds, ... Diploma.
167. J. W. Tillman, Detroit, Bureau, ... Diploma.

JOHN SWEGLES,
H. H. SHERMAN,
HENRY METZ,
H. SUTTON,
Committee.

DIVISION F.—PAINTINGS, DRAWINGS, DAGUERREOTYPES AND MUSICAL INSTRUMENTS.

CLASS I.

The Committee on Paintings, Drawings, Daguerreotypes and Musical Instruments, report that they have carefully examined each article, and in accordance with their best judgment have awarded as follows:

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Entry.

65. Stein & Bucheiter, Detroit, 1 Steinway & Sons' Pianos, Diploma and $5 00

98. Amsden & Cargill, Detroit, 1 foreign made piano-cased Melodeon, 1st prem., Diploma and 3 00

16. John Tower, Detroit, 1 Melodeon, (Detroit make) .....Diploma.

9, 10, 11. Simmons & Blakeman, Detroit, Melodeons, (Detroit make,) Diploma and..... 3 00

9. Two new cases of beautiful instruments were on exhibition, of the superiority of which, the Committee do not feel competent to judge.

12, 13. Godfrey, Dean & Laible, Detroit, Fireman's Banner and Ornamental Painting, ...Diploma.

28, 29, 30. A. Jordan, Detroit, Artchitectural Drawings, ...Diploma.

20, 22, 23, 26. Sheldon Smith, Detroit, Architectural Designs, ...Diploma.

—. Miss M. E. Barrett, Detroit, specimens Penmanship, ...Diploma.

70, 71, 72. Mrs. Julia A. Hubbard, Detroit, Oil Paintings, 2d prem., ... 4 00

88. G. R. Lillibridge, Detroit, Lilliographic Writing, ... 2 00

92. T. Palmer, Detroit, Landscape Painting, 2d prem., ... 3 00

93, 94. Mrs. Sheldon McKnight, Detroit, Pastel Painting, 1st prem., ... 3 00

163 to 172. M. Sutton, Detroit, Oil Painting, Daguerreotypes and Photographs, 1st prem., Diploma and 5 00

126, 127. Miss Caroline L. Howe, Detroit, Pencillings, 1st premium, ... 3 00

129. Harriet Lambert, Detroit, Oriental Painting, 1st prem., .. 3 00

1. Joseph Monds, Detroit, specimens Prepared Plants, ...Diploma.

6. Miss C. Hyde, Detroit, Pencilling, 1st prem., ... 3 00

8. Miss Frances Crawpro, Detroit, Pencil Drawing, 2d premium.

W. C. SMITH,
GEO. W. WATSON,
LORREN MILLS,
Committee.

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CLASS II.

Needle, Shell and Waxwork.

Entry.		
2.	Miss C. Hyde, Lady's Embroidered Skirt, 2d prem.,	$2 00
3.	Miss C. Hyde, Gentleman's Embroidered Shirt, 1st premium,	3 00
120.	Mrs. E. W. Hudson, Detroit, vase Wax Flowers, 1st premium,	3 00
67.	Eliza A. White, Detroit, vase Wax Fruit, 2d prem.,	2 00
121.	Mrs. E. W. Hudson, vase Potch Mania, 3d prem.,	1 00
14.	John Garrigan, Detroit, Chinese Shells,	Transactions.
17.	Mrs. E. A. Adams, Farmington, Embroidery and Leather Work Center Table,	3 00
27.	Mrs. G. A. Thurston, Detroit, Embroidered Lady's Skirt, 1st prem.,	3 00
32.	Mrs. J. B. Starring, Embroidered Chair Cover, 1st premium,	3 00
33.	Mrs. J. B. Starring, Ottoman Cover, 1st prem.,	3 00
34.	Mrs. J. B. Starring, Worked Collar, 3d prem.,	1 00
36.	Mrs. J. B. Starring, Boquet Zephyr Flowers, 2d prem.,	2 00
38.	Mrs. Judge Chipman, Detroit, Lace Shawl, 2d prem.,	2 00
44.	Mrs. G. R. Griswold, Detroit, case of Embroidery, 2d premium,	2 00
49.	Mrs. E. Perkins, Birmingham, one Flower Vase,	1 00
50.	Mrs. Christy, Detroit, knit Bed Spread,	2 00
66.	Eliza A. White, Detroit, Embroidered Silk Apron,	1 00
75.	Mrs. W. L. Coonly, Farmington, Ottoman Cover, 2d premium,	2 00
76.	Mrs. L. W. Coonly, Table Cover,	2 00
77.	Mrs. W. L. Coonly, Lamp Mat, 1st prem.,	2 00
79.	Mrs. George R. Mechling, Detroit, Black Emerald Box, 2d prem.,	1 00
80.	Mrs. H. H. Hoffman, Detroit, pair of Ottomans, (needle work,) 2d prem.,	1 00
82.	Miss Hattie Ezekiel, Detroit, Child's Suit of Clothes, 2d prem.,	1 00

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Entry.

89. Mrs. J. B. Callard, Detroit, Embroidered Vest Pattern, 2d premium,..... $2 00
91. Mrs. J. B. Callard, Embroidered Lamp Stand, 2d premium, ... 2 00
117. Nettie O. Baxter, Jonesville, Lady's Collar, 1st prem.,... 3 00
129. Maria C. Patton, Dowagiac, Worsted Work, 1st prem.,... 3 00
130. Louisa Thebo, Amherstburgh, C. W., Needle-work Chair, 2d prem.,..... 2 00
131. Lousia Thebo, Gentleman's Shirt, 2d prem.,..... 1 00
47, 48. Mrs. E. Perkins, Shell-work Frames,..... 2 00
78. Mrs. Thomas Blackett, Roseville, Worked Lace Silk Veil, 1st prem.,..... 3 00
91. D. P. Barret, Detroit, one case Shirts,..... 1 00
7. Sarah A. Bronson, Detroit, Waxwork, 3d prem.,..... 1 00
74. Miss Julia A. Hubbard, Detroit, Embroidered Collar, 2d prem.,..... 2 00
81. Mrs. H. Hoffman, Detroit, Footstool, 2d prem.,..... 2 00

D. C. JACOKES,
W. H. COLLINS,
MRS. C. S. ELIPERAN,
MRS. A. F. BELL,
MRS. F. HALE,

Committee.

DIVISION G.

CLASS I.

Flowers.

The Committee on Division G, Class 1, make the following report:

29. Hubbard & Davis, Detroit, best and greatest variety cut flowers, (professional,) 1st prem.,..... $3 00
—— Wm. Adair, 2d best and greatest variety cut flowers, 2d premium,..... 2 00
—— Benj. McCreery, Detroit, greatest variety cut flowers, (amateur,) 1st prem.,..... 3 00

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Entry.		
151.	Geo. Taylor, Kalamazoo, greatest variety cut flowers, (amateur,) 2d prem.,	$2 00
230.	Wm. Adair, Detroit, greatest variety of dahlias, 1st prem.,	3 00
2.	John Ford, Detroit, greatest variety of dahlias, 2d prem.,	2 00
241.	Wm. Adair, best 12 dissimilar blooms—dahlias, 1st prem.,	3 00
3.	John Ford, 2d best 12 dissimilar blooms—dahlias, 2d premium,	2 00
231.	Wm. Adair, best single variety dahlias, 1st prem.,	2 00
4.	John Ford, 2d best single variety dahlias, 2d prem.,	1 00
238.	Wm. Adair, best and greatest variety roses, 1st prem.,	3 00
33.	Hubbard & Davis, 2d best and greatest variety roses, 2d premium,	2 00
34.	Hubbard & Davis, best 12 dissimilar blooms, 1st prem.,	2 00
6.	John Ford, best and greatest variety phloxes, 1st prem.,	3 00
35.	Hubbard & Davis, best and greatest variety verbenas, 1st premium,	2 00
239.	Wm. Adair, 2d best and largest variety of verbenas, 2d premium,	1 00
8.	John Ford, best seedling verbenas, 1st prem.,	2 00
36.	Hubbard & Davis, 2d best seedling verbenas, 2d prem.,	1 00
9.	John Ford, best variety indigenous flowers, 1st prem.,	3 00
37.	Hubbard & Davis, 2d best greatest variety indigenous flowers, 2d prem.,	2 00
10.	John Ford, best collection greenhouse plants, 1st prem.,	5 00
235.	Wm. Adair, 2d best collection greenhouse plants, 2d prem.,	3 00
11.	John Ford, best collection German asters, 1st prem.,	2 00
39.	Hubbard & Davis, 2d best collection German asters, 2d premium,	1 00
236.	Wm. Adair, best hand boquet, (round,) 1st prem.,	2 00
40.	Hubbard & Davis, 2d best hand boquet, (round,) 2d prem.,	1 00
41.	" " best hand boquet, (flat,) 1st prem.,	2 00
237.	Wm. Adair, 2d best hand boquet, (flat,) 2d prem.,	1 00
24.	Mary Ford, best basket flowers with handle, 1st prem.,	2 00
42.	Hubbard & Davis, 2d best basket of flowers with handle, 2d prem.,	1 00
43.	Hubbard & Davis, best and most beautifully arranged basket of flowers, 1st prem.,	2 00

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Entry.

350. Mary Ford, 2d best and most beautifully arranged basket of flowers, 2d prem., ... $1 00

44. Hubbard & Davis, floral design, 1st prem., ... 2 00

For prizes offered, upon which awards were not made, there were no entries.

S. D. BINGHAM,
E. D. LOSEY,
Committee.

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CLASS II.

Apples.

The Committee on Division G, Class 2, award the following premiums:

Amateur List.

303. John Allen, Plymouth, greatest and best variety of winter apples, 1st prem., ... $4 00

207. D. Clarkson, Northville, 2d best greatest and best variety of winter apples, 2d prem., ... 2 00

225. H. Bradley, Northville, 3d best greatest and best variety of winter apples, 3d prem., ... 1 00

304. John Allen, best twelve specimens of single variety, 1st premium, ... 3 00

210. D. Clarkson, 2d best twelve specimens of single variety, 2d prem., ... 2 00

122. Thomas Blackett, 3d best twelve specimens of single variety, 3d prem., ... 1 00

300. D. Clarkson, best and greatest variety of autumn apples, 1st prem., ... 4 00

— Fred Smith, 2d best and greatest variety of autumn apples, 2d prem., ... 2 00

124. Thomas Blackett, Roseville, best 12 specimens of autumn apples, 1st prem., ... 3 00

211. D. Clarkson, 12 specimens autumn apples, 2d prem., ... 2 00

306. John Allen, 12 specimens autumn apples, 3d prem., ... 1 00

212. D. Clarkson, 12 specimens summer apples, 1st prem., ... 3 00

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Entry.

305. John Allen, 12 specimens summer apples, 2d prem., ... $2 00
206. D. Clarkson, table apples, 1st prem., ... 5 00
302. John Allen, table apples, 2d prem., Thomas' Fruit-Book and 3 00

Professional List.

105. T. T. Lyon, Plymouth, best and greatest variety of winter apples, 1st prem., Diploma and 3 00
328. Ilgenfritz & Bently, Monroe, 2d best and greatest variety of winter apples, 2d prem., Diploma and 2 00
106. T. T. Lyon, best and greatest variety of autumn apples, 1st prem., Diploma and 3 00
340. Ilgenfritz & Bently, 2d best and greatest variety of autumn apples, 2d prem., ... 2 00
47. Hubbard & Davis, 3d best and greatest variety of autumn apples, 3d prem., ... 2 00
252. D. Cook, Jackson, best and greatest variety of summer apples, 1st prem., Diploma and 3 00
107. T. T. Lyon, 2d best and greatest variety of summer apples, 2d prem., ... 2 00
342. Ilgenfritz & Bently, 12 specimens winter apples, 1st prem., Diploma and 2 00
132. D. Cook, 12 specimens winter apples, 2d prem., ... 2 00
108. T. T. Lyon, 12 specimens winter apples, 3d prem., ... 1 00
110. " " 12 specimens summer apples, 1st prem., ...
133. D. Cook, 12 specimens summer apples, 2d prem., ... 2 00
109. T. T. Lyon, 12 specimens apples, premium, ... 1 00
111. " " 12 specimens winter seedlings, 1st prem., Diploma and 2 00
112. T. T. Lyon, specimens summer seedlings, 1st premium, Diploma and 2 00

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CLASS III.

Pears.

The Committee on Pears are pleased to report that there is a manifest improvement in the exhibition of Pears, as compared with last year, and award the following premiums:

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Amateur List.

Entry.

253. H. Walker, best and greatest variety, 1st prem., Fox's Text Book and $4 00

250. Benj. McCreery, 2d best and greatest variety, 2d prem., .. 3 00

242. M. H. Hunter, 3d best and greatest variety, 3d prem., ... 2 00

119. Thomas Blackett, Collection Autumn Pears, 1st premium, ... Downing's Landscape Gardening and Architecture.

96. Nicholas Uhl, six specimens Autumn Pears, 1st prem., .. 3 00

Professional List.

229. Wm. Adair, greatest and best variety of good Pears, 1st prem., ... 4 00

114. T. T. Lyon, greatest and best variety of good Pears, 2d prem., ... 3 00

345. Ilgenfritz & Bently, greatest and best variety of good Pears, 3d prem., ... 2 00

310. J. M. Harwood, Collection Autumn Pears, 1st premium, ... Landscape Gardening and Architecture.

115. T. T. Lyon, 6 specimens Autumn Pears, 1st prem., ... 3 00

49. Hubbard & Davis, 6 specimens Autumn Pears, 1st prem., 2 00

CLASS IV.

Miscellaneous Fruits.

The Committee on Miscellaneous Fruits respectfully report, that in the discharge of their duty, they were much gratified with the variety and excellence of the Fruits coming under their observation.

There were exhibited in lot No. 116, some thirty varieties of the Peach, and all of a quality such as it is desirable and advantageous to cultivate. In lots 127 and 142, were some of rare excellence; and all exhibited were specimens fully demonstrating that the soil and climate of Michigan, notwithstanding the severities of a few winters, is favorable to the production of the Peach in great perfection.

The Grape also came under our observation. Lot 247, cultivated under glass, were fine specimens, evincing taste, skill and perseverance

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in the cultivator to bring them to so great a degree of perfection. Of the Native Grape there were several varieties, and of good quality for so cool a season. The Isabella and Hamburgh were in greatest abundance, and in great perfection. There were several varieties of the White Grape, also some of the Concord, all possessing desirable qualities, and well worthy the attention of a fruit-loving community.

Your Committee would earnestly recommend to the people of Michigan, a more generous cultivation of the Grape. It is, after the setting, the cheapest and one of the most healthful of Fruits. Even neglect will produce a passable crop, but a little attention will be amply repaid. As an article of diet, it is well worthy of cultivation—imparting vigor and tone to the digestive organs, and counteracting biliary tendencies. It is desirable not only for food, but for its medicinal properties.

There were also exhibited some beautiful specimens of several varieties of the Plum; though like the Grape, requiring a warmer season than the past to mature, and impart to them their peculiar excellence.

The exhibition of Quinces was meagre; only three specimens, and those not superior in any respect.

The Melons exhibited were necessarily of those varieties requiring a long season to perfect them, the earlier kinds having passed away; and even with a season prolonged, as it has been, without frosts, to check the maturing of vegetation, many of the specimens exhibited were not fully ripe. There were some, however, of superior flavor, and of good quality, among which lot No. 218, a Persian Melon, is recommended a worthy of cultivation.

Your Committee also examined a variety of articles exhibited by Mrs. N. Haskell, of Monroe, consisting of prepared Fruits and Vegetables; also specimens of Grape, Currant and Raspberry Wines; a choice variety of Sweet Corn, and some beautiful Spanish Peppers. Mrs. Haskell is worthy of commendation for her enterprise in cultivating, manufacturing and preserving the various Fruits and Vegetables used for dessert, or culinary purposes, and which contribute essentially to the health, convenience and gratification of our population. The Committee would recommend a discretionary premium to Mrs. Haskell.

There were several specimens of Wine from the Native Grape, and also from the Currant; some very good for the time they had been made, but all should have remained longer on the lees.

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The Committee award the following premiums:

Entry.		
50.	Hubbard & Davis, Native Grapes raised in open air, 1st prem.,	$3 00
379.	Ilgenfritz & Bently, Native Grapes grown in open air, 2d prem.,	2 00
247.	Benj. McCreery, Grapes grown under glass, 1st prem.,	3 00
379.	Ilgenfritz & Bently, Seedling Grapes, 1st prem.,	1 00
76, 77, 78.	H. Hallock, Detroit, Grapes grown in open air, 1st prem.,	3 00
116.	T. T. Lyon, large variety of Peaches, 1st prem.,	4 00
117.	" " Seedling Peaches, 1st prem.,	2 00
127.	Joshua Simmons, 10 specimens Peaches, 1st prem.,	3 00
141, 142.	Thomas Matthews, Detroit, 10 specimens Peaches, 2d prem.,	1 00
246.	Benj. McCreery, collection of Plums, 1st prem.,	3 00
51.	Hubbard & Davis, best 2 Water Melons, 1st prem.,	2 00
349.	John Ford, Detroit, best 2 Water Melons, 2d prem.,	1 00
14.	John Ford, Nutmeg Melons, 1st prem.,	2 00
52.	Hubbard & Davis, Nutmeg Melons, 2d prem.,	1 00
218.	Nicholas Benoist, Detroit, Persian Melons, 1st prem.,	2 00
82.	Thomas Leadbeater, Detroit, Persian Melons, 2d prem.,	1 00
79.	H. Hallock, Quinces, 1st prem.,	3 00
53.	Hubbard & Davis, Wine from Currants,	2 00
244.	D. Hubbard, Birmingham, Wine from Currants, 2d premium,	1 00

The collection of Wines and Preserved Fruits by Mrs. C. F. Haskell, Monroe, are all of them superior in quality, and put up in a very superior manner; and for the collection the Committee recommend a premium of $10 00.

W. H. MONTGOMERY,
I. E. ILGENFRITZ,
L. DARRAL,
W. H. SMITH,
MOSES WISNER,

Committee.

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CLASS V.

Vegetables.

The Committee on Vegetables, respectfully report that they have discharged the duties assigned them, and would most cheerfully enter into a minute account of their doings; but the necessary length of detial, if entered upon, would preclude the reading and hearing of it. They would therefore say, that the Vegetables were all good—very good—such as are a credit to agriculturist and gardeners to produce, demonstrating the bounteousness of nature, when aided by the science and application of human intelligence.

There was a variety of articles exhibited by Mr. D. D. Tooker, of Napoleon, which though not coming under the head of articles entered for premium, were worthy of "honorable mention." The Earth Almund, or Cheefa, the Chinese Yam, and early Corn presented by him, are entitled to an experiment, and may prove valuable additions to the numerous varieties in present use.

The Committee make the following awards:

Entry.		
97, to 104.	P. Desnoyer, Detroit, best and greatest variety of roots for cattle, 1st prem.,	$4 00
251.	M. Flanagan, Detroit, best and greatest variety of roots for cattle, 2d prem.,	2 00
15.	John Ford, best and greatest variety of culinary vegetables,	4 00
55.	Hubbard & Davis, best and greatest variety of culinary vegetables, 2d prem.,	2 00
216.	T. Hopson, Detroit, 12 blood beets, 1st prem.,	2 00
220.	Nicholas Benoit, 12 turnip-rooted beets, 1st prem.,	1 00
348.	John Ford, 6 heads cauliflower, 1st prem.,	2 00
102.	P. Desnoyer, 12 carrots, 1st prem.,	2 00
138.	Thos. Mathews, 6 heads cabbage, 1st prem.,	2 00
16.	John Ford, 12 plants celery, 1st prem.,	3 00
136	Thos. Mathews, 12 parsnips, 1st prem.,	2 00
17.	John Ford, egg plants, 1st prem.,	2 00
63.	Hubbard & Davis, white onions, 1st prem.,	2 00
87.	Thos. Leadbeater, yellow onions, 1st prem.,	2 00

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Entry.		
222.	P. Whitmore, Fentonville, red onions, 1st prem	2 00
125.	Thos. Blackett, seedling potatoes, 1st prem.,	2 00
93.	R. R. Briggs, seedling potatoes, 2d prem.,	1 00
354.	D. D. Tooker, Napoleon, table potatoes, 1st prem.,	2 00
370.	Prince Bennett, Ypsilanti, table potatoes, 2d prem.,	1 00
232.	Wm. Adair, 3 autumn squashes, 1st prem.,	1 00
347.	H. M. Dean, Detroit, 3 crooked neck squashes, 1st premium.,	1 00
288.	Thomas Smith, 3 vegetable marrow squashes, 1st premium,	1 00
358.	D. D. Tooker, squash, 1st prem.,	1 00
215.	T. Hopson, half peck tomatoes, 1st prem.,	1 00
137.	Thos. Mathews, vegetable oysters, 1st prem.,	1 00
157.	J. S. Tibbits, half peck Lima beans, 1st prem.,	1 00
364.	Josiah Osborne, Vandalia, sweet potatoes, 1st prem.,	1 00
68.	Hubbard & Davis, pie plant, 1st prem.,	1 00

W. H. MONTGOMERY,
HENRY W. DEAN,
D. R. UNDERWOOD,
JOSEPH SMITH,
MOSES KINGSLEY,
Committee.

DIVISION H.—GRAIN, FLOUR AND SEEDS.

The Committee on Grain, Flour and Seeds, award the following premiums:

4.	John Kirk, Detroit, 2 bushels black oats, 1st prem.,	$3 00
44.	D. D. Tooker, 2 bushels white oats, 1st prem.,	3 00
5.	W. H. Stout, Troy, 2 bush. white oats, 2d prem.,	2 00
26.	M. Fisher, Detroit, 2 bushels yellow dent corn, 1st premium,	5 00
18.	Thomas Blackett, bushel yellow dent corn, 2d prem.,	3 00
30.	J. S. Tibbitts, 2 bush. yellow blaze corn, 1st prem.,	5 00
31.	J. S. Tibbitts, 12 ears yellow blaze corn, 1st prem.,	1 00
33.	J. S. Tibbitts, Plymouth, 12 ears Yankee corn, 1st premium,	1 00

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Entry.

5. W. H Stout, 2 bush. blue stem wheat, 1st prem., ... $2 00
41. A. E. Pardee, 2 bush. spring blue stem wheat, ... 5 00
16. H. H. & R. F. White, Detroit, bbl. St. Johns steam mill flour, 1st prem., ... 5 00
14. R. Gillespie, Detroit, barrel of flour, 2d prem., ... 3 00
29. Mrs. F. Leslie, 2 corn cakes, 1st prem., ... 2 00
37. A. Wattles, Troy, Timothy seed, 1st prem., ... 5 00
35. S. Wattles, Timothy seed, 2d prem., ... 4 00
26. W. M. Lewis, Birmingham, Timothy seed, 3d prem., ... 3 00
45. D. D. Tooker, 2 bush. Egyptian barley, 1st prem., ... 3 00
57. P. Bennett, Ypsilanti, Marrowfat peas, 1st prem., ... 4 00

DIVISION K.—MISCELLANEOUS ARTICLES.

The Committee on Division K, miscellaneous articles, having examined the articles in that division, make the following report and awards:

57. Ira Mayhew, Albion, Self-adjusting Smoke, Storm and ventilating Chimney Cap, an invention which the Committee highly recommend, and to which they award, as too small a testimonial, a ..... Diploma and Silver Medal.
14. Joseph Wanbecq, Detroit, carved marble mantle-piece, Diploma, and Silver Medal.
33. H. E. Benson, Detroit, 4 pine planks, ... Diploma.
13. Augustus Day, Detroit, 1,000 white pine shingles, ... Diploma.
55. Hovey & Co., Grand Rapids, 3 barrels plaster, ... Diploma.
36. Whiting & Benedict, Detroit, improved building blocks, Silver Medal.
38. C. E. Hall, Detroit, pressed brick ..... Diploma.
41. Thos. Burton, N. Y. city, American solidified milk ..... Diploma.
17. Godfrey, Dean & Laible, plain and decorating paper hangings, ... Silver Medal.
2. Richmond & Backus, Detroit, specimens blank books, Diploma and ..... Silver Medal.
51. A. Brown, Detroit, set of agricultural account books, ... Diploma.
—. W. D. Cochran, Detroit, set of mill books, ... Diploma.
18. F. Rolshoven, Detroit, case of jewelry and hair braiding, ... Diploma.

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Entry.

29. P. Hamilton, Detroit, pine shingles,.....Diploma.

—. S. D. Elwood, Detroit, specimens bookbinding,.....Diploma.

—. Judge Burt, Detroit, Solar compass,.....Silver Medal.

39. Wm. A. Burt, instrument for ascertaining latitude and longitude, &c.,.....Silver Medal.

—. S. B. Farnham, New Baltimore, Chandelier with self-generating gas burners,.....Diploma.

The self-generating gas burner, is a valuable invention for the burning of common fluid in city gas fixtures, and well worthy of attention in all country towns where the city gas cannot be had.

47. S. B. Farnham, New Baltimore, extension arms, with self-generating gas burner,.....Diploma and Silver Medal.

28. S. B. Farnham, New Baltimore, 3 stand lamps, with self-generating gas burners, another valuable improvement for family lights, being a portable gas, and safe from all explosions, at less expense than common lights,.....Diploma.

WILDER WINSLOW,
N. C. PARKHURST,
A. GOODMAN,
S. GILBERT,

Committee.

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PRIZE ESSAY

ON THE

BREEDING AND MANAGEMENT OF CATTLE.

BY EDWARD MASON.

[To which was awarded the Premium of the Society, by the Executive Committee, at its Meeting in January, 1858.]

The Breeding of Cattle is a most important part of Agriculture—for their milk and flesh supply man with food, their labor assists him in preparing the soil for every kind of crop, and their manure is of essential service to the land. Hence, the ox was so highly esteemed by the ancients, that whoever killed one maliciously was punished with death as if he had killed a citizen, because he was considered as a murderer of the human race, whose nourishment and life stood in need of this animal.

The Egyptians worshipped the ox, and this idolatry is said to have been established in honor of Apis, a king of the Argives, who, quitting his own country and going into Egypt, was, after his death, worshipped in the shape of an ox, in gratitude for his having taught the Egyptians the art of husbandry.

The idolatrous habits of the Ancients have been transmitted to the Hindoos of the present day. With them, the cow is a sacred animal; and the late terrible rebellion in India was occasioned by the inadvertance of the British military authorities in that country, who endeavored to compel the Sepoys to use rifle cartridges, in the manufactory of which, the fat of the cow and the hog had been used. The first substance was odious to the Hindoos; the latter, to the Mahometans.

The ox was used as a beast of burthen long before the horse, and that his value was fully appreciated by the Ancients, we may learn from the divine honors paid to Apis.

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When the Romans invaded Britain, they found the inhabitants in possession of large herds of cattle, the milk of which was their principal means of subsistance.

Rude and barbarous tribes or nations have never studied to improve the size or form of their cattle or sheep,—they were satisfied with their milk, flesh and skins. The production of animals of superior quality was left to the refinement and taste of enterprising individuals in modern times.

Neither time nor space permit us to enter into a full description of the numerous breeds of cattle which have had their day, and been in favor with farmers during the last century. We will select the *best*, and endeavor to give a brief description of them.

The cattle of the United States are the descendents of stock which have been imported from almost every country in Europe. Spain, France, Great Britain and Ireland, Germany, Holland and Belgium, have each contributed some of their domestic animals, with the emigrants which they sent to people this country: in fact, importations of stock have been going on from 1493 to 1858.

The best cattle in the United States have been derived from Great Britain and Ireland, and on this account we will give a brief description of the principal breeds that now exist in these countries.

When the ancient Britons were conquered by the Romans, they retired into the most inaccessable parts of their country, driving their herds with them. The Silures, a brave and warlike people, who long withstood the invaders, retired into the mountains of Wales. They possessed a valuable breed of cattle, from which the Herefords are said to be descended. Another portion of the Britons sought safety in the weald of East Sussex, and from their cattle the present Sussex breed are said to be derived. The Devons, too, are known to be descended from the ancient stock of the country; indeed, there is such a resemblance, in many particulars, between the Hereford, Devon, Sussex, Pembroke and Glamorgan breeds, that it is not unlikely that they have all sprung from the same origin.

The Devons, as their name implies, are derived from Devonshire, England, and have long been the favorite breed of that and the adjoining counties. At the present day, the Devonshire farmers do not breed these cattle extensively themselves. They purchase the calves from

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breeders in Somerset and Dorset, feed them for a few years, select those which appear to be the most desirable for the yoke and other purposes, and sell the remainder to the farmers of Somersetshire, &c., who fatten them for the London market.

The Devons have been introduced into every part of Great Britain and Ireland, Continental Europe, the United States and British North America. Their color is generally light red, and their figure, gait and temper good and desirable. The Devon ox excels all others in fitness for the plough, or any other kind of labor, and is also remarkable for a tendency to fatten without any extraordinary quantity of food. They are also possessed of more speed than any other breed of cattle in the world, with the exception of the famous Nagpores of the East Indies. They bear the climate of the Western States well, are easily matched, on account of their uniformity of color, and are an excellent breed for general purposes.

Some of the characteristics of this breed are as follows: The Devon bull has a bold countenance, eyes full and clear, circle around the eyes orange-colored, nose cream-colored, horns a little turned up at the tips, back straight, hind quarter full and muscular, flank and shoulder deep, fore-arm and knee large and strong, legs small and short.

The Devon cow has a full, clear eye, small head, turned up horns, nose small, and cream colored; shape, symmetrical; fore-arm thick and strong, legs small and short; she is generally much smaller than the bull. She is a good milker, a kind and careful nurse, and is by some persons much esteemed for the dairy.

The Devon ox is docile and tractable, and as we have before mentioned, excels all others in the field, or on the road. When all the good qualities of this breed are considered, it does not appear wonderful that they have been great favorites in England from time immemorial.

Among the most successful breeders of Devons in England at the present day, may be mentioned Messrs. James and John Quantly, who generally carry off the leading prizes in this class, at the exhibitions of the principal Agricultural Societies.

The show of Devons at the Michigan State Fairs, for the past few years, has been highly creditable to the breeders of this State. Among the most successful raisers of Durham cattle in Michigan, may be mentioned the names of C. H. Williams, Coldwater, G. W. Gale, Ypsilanti,

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E. M. Grippen, Coldwater, M. Shoemaker, Jackson, J. Allen, Coldwater, F. V. Smith, Coldwater.

The Herefords.—Herefordshire is an English county on the borders of Wales; in ancient times it was inhabited by the Silures, a brave and warlike people, who long withstood the aggressions of the Romans. Sir Roderick Murchison, the celebrated geologist, has named a series of secondary, or transition rocks, "Silurian," in honor of this ancient people. When they were obliged to yield to the superior discipline of the invaders, they retired into the fastnesses of their own and the adjoining country, driving their cattle with them. The Herefords are said to be descended from this stock, and several circumstances combine to prove the correctness of this opinion; and there seems to be sufficient reason for believing, that whilst the Durham, the Ayrshire, and some other breeds, are the result of repeated crossings and selections, the Devon, Hereford, Susssex, Pembroke and Glamorgan breeds, are the descendants of the ancient cattle of England and Wales.

The Herefords and the Devons bear a close resemblance to each other in some particulars, such as shape and docility, but they differ in size and color. The Hereford ox is generally dark red or brown; some are yellow, and a few are brindled. The old Herefords were brown, or dark red, *without a spot of white about them;* the new breed, which has sprung up from the old stock within the last sixty years, *have white faces, throats and bellies.* They are shorter in the carcass, and also in the legs, than the Devons, but they are rounder and wider across the hips, broader and heavier in the chine, and deeper in the chest than that breed.

The Hereford ox fattens well, and grows to a greater size and weight than the Durham; he is also much esteemed for the labors of the field, and yields excellent beef, but with all these perfections, it is very doubtful if this breed would be well adapted for Michigan, or any of the Western or Northwestern States. The warmest advocate of the Herefords must admit that the cows of that breed are generally *inferior to those of most other breeds;* they are small, and yield but a scanty supply of milk. It has been remarked, that a Hereford cow will sometimes produce a bull calf which not unfrequently attains a weight three times as great as herself. The Hereford ox consumes a large quantity of food; he grows to an immense size in the rich and almost perennial pastures

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of England and Ireland, and after being house-fed for a considerable time, and pampered with oil-cake, and other dainties, is brought to the principal Agricultural exhibitions to carry off the prize, as the largest and fattest ox, in which achievement he is generally successful; but for general purposes, the breed is not making much progress even in their native country.

The Herefords were introduced into the United States a few years ago, and it is said that they are doing well, and are likely to succeed in various parts of the Union, and they no doubt will prove a valuable acquisition to those who have abundance of pasture, plenty of provender, and who, in the ardor of competition, are unable, or unwilling, to calculate the cost of their production, or to acknowledge the merits of any other breed.

Among the principal breeders of Hereford cattle in England may be mentioned the Duke of Bedford, the Earl of Talbot, Prince Albert, and others, and in Ireland, the Earl of Clancanty, Messrs. Latouche, of Dublin, the Hon. Barry Zeloeston, and others. In the United States, Messrs. Clay, of Kentucky, Erastus Corning, and W. H. Lotham, and others.

Although the Herefords in some cases grow to a large size, and produce most excellent beef, it is not probable that they possess sufficient merit to compete with the Durhams, or the Devons, nor is it at all likely that they will even supplant these breeds in the estimation of the public.

The Sussex Cattle.—Some of the ancient Britons, driven from their homes by the invaders of their country, sought refuge in Wales and Cornwall, and others in the weald of East Sussex. In every case of removal, they brought their cattle with them, and preserved them with the greatest care. The Sussex breed are the offspring of some of these cattle, and they bear so close a resemblance in many respects to the Devon and the Hereford, that evidently they are kindred stock.

The Sussex ox has a coarser head than the Devon, yet it is finer in that point than some of the breeds. The horns project, and then turn upwards; the eye of the ox is full, clear and mild, but in the cow it evidently bears tokens of restlessness—a character which distinguishes her from almost every other breed.

The principal defect of the Sussex ox is at the shoulder; there is

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more wideness and roundness at the withers. When the animal is looked at from behind, there seems to be no projecting point at the shoulder; but this defect is counterbalanced by many good qualities. The chest is wide and capacious, the fore-arm is large and muscular, and the legs, although coarser than those of the Devon, are small and fine downwards. The loins are wide; the hip bones do not rise high, but are large and wide, and the space between them is well filled up. The hind-quarters are well made; the tail is fine, but is set on lower than on the Devon.

The hide of the true Sussex cow is mellow; a hard, thick hide, is, in any breed, the sign of a badly bred, unthrifty animal.

The Sussex cows are not so well adapted for the dairy as other breeds; they are generally restless and discontented, breaking through fences, and going astray. Their milk is not very productive of butter, but when dried up they generally fatten exceedingly quick. They are not much esteemed as breeders. It is rare to find many good qualities combined in one breed.

The Durhams are the only breed that constitute an exception to the general rule, for in them are combined *size and shape*,—the property of yielding an abundance of milk, and a tendency to fatten. As their name implies, they originated in the county of Durham, England; which place has for a long time been celebrated for a superior breed of short horns, which, together with possessing large size and beauty of shape and color, were endued with the desirable properties of producing an abundant supply of milk and getting fat on a moderate quantity of food.

The rich pastures on the banks of the Tees, a river which separates the counties of Durham and York, became noted for a peculiar race of cattle, which were for a long time well known as the "Teeswater;" their surpassing excellence became so apparent that the most distinguished breeders were anxious to possess them.

Mr. Millbank, of Birmingham, raised an ox of this breed, which, when slaughtered at the age of five years, weighed 2114 lbs., and a cow from his stock weighed 1540 lbs.

After Mr. Millbank's time, the Teeswater's were further improved by Mr. Colling, who by persevering in a judicious system of crossing, brought the breed to a very high degree of perfection. It is certain that he crossed the Teeswater with the Kylor's and the Galloway's, and

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crossed the progeny of these back again with the pure Short-Horn. He also corrected the faults of his cows, by putting them to bulls which were calculated to remedy the defects alluded to; he purchased a bull named Hubback, and from this animal sprung some of the most celebrated Short-Horns. The following description of this animal is to be found in "Youatt's Treatise on Cattle:" Mr. Waistell, of Alihill, used to admire this bull as he rode by the pasture in which the animal grazed; he attempted to purchase him, but the price asked appeared too much—it was only £8 ($40)—and the bargain was not closed; still, he longed for the beast, and happening to meet Mr. R. Calling near the place, asked his opinion of the animal. Mr. Calling acknowledged that there were good points about him, but his manner induced Mr. Waistell to suspect that Mr. C. thought more highly of the bull than his language expressed, and he hastened the next morning, concluded the bargain and paid the money. He had scarcely done so, when Mr. R. Calling arrived for the same purpose, and as the two farmers rode home together, they agreed that it should be a joint speculation.

Some months passed by, and either Mr. Waistell's opinion of the bull cooled, or his partner did not express himself very warmly about the animal, and Mr. Waistell and Mr. R. Calling transferred Hubback to Mr. C. Calling, who with the quick eye of an experienced breeder, saw the value of the beast. Mr. Waistell soon expressed his regret at having been induced to part with him, and his disappointment was extreme when Mr. Calling confined Hubback exclusively to his own stock, and would not permit him to serve one of Mr. Waistell's cows.

It is certain that Hubback became the sire of a noble race of cattle, and should hold the same rank among English stock as the Justin Morgan has among American horses.

The following is said to be a correct pedigree of Hubback, (319): Yellow, red and white; calved in 1777; bred by Mr. John Hunter, of Harworth; got by Mr. George Snowdon's bull, (612); his dam bred by Mr. Hunter, by a bull of Mr. Banks, of Harworth; g. d. bought by Mr. Stevenson, of Kelton. Snowdon's bull, it may be remarked, was directly descended from the stock of Sir James Pennyman.

The circumstance which brought the Durham cattle into great notice, was the production of the celebrated Durham ox. At five years old, this ox was sold for exhibition to Mr. Bulmer, for £140, in 1801. He

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at that time weighed 216 stones, (3,024 lbs.) This extraordinary animal was exhibited for six years; at the end of this time, he had to be slaughtered, having met with an accident by which his hip bone was dislocated. He weighed, when slaughtered, 2620 lbs.

The wonderful increase, and almost universal diffusion, of the Short Horns, have conferred incalculable benefit upon the Agriculturists of Europe and America; and their merits are now almost as well known in every part of Continental Europe, the United States and British North America, as they were a few years ago on the banks of the Tees, in their native pastures—the rich lands of Durham and Yorkshire.

The following description of a Short Horn bull, cow and calf, are from the pen of Mr. William Davis, Chelsea, England: "As to the general shape and qualities of a Short Horn bull, his form should be symmetrical and level, with the shoulder, or blade-bone, slanting to the spine, or back-bone; the ribs springing out like a barrel; hip-bone full and long from the hip to the insertion of the tail; hind-quarter long from the tail to near the hough, forming nearly a square from the tail to the flank; the fore-quarters deep, and breast point near to the knee; wide between the fore lege, and thick through the region of the heart, which is a sign of a good constitution; hind and fore legs showing substance to the knee, and from the latter small and short boned to the hoof; the under part of the abdomen nearly straight, which indicates but little garbage or offal; the head should be straight, well set on, and rather high, with rough, curly hair on the forehead; horns rather stout, protruding straight from the head, turning up a little at the points; eye full; nose of a pale flesh color, with the muzzle small; colors, red on grey roan, mixed with white, pure white, red and white in patches; blood red, with an orange tint about the eye and nose, and sometimes a small white patch about the abdomen and flanks.

A well bred Short Horn cow should have *length of carcass,* a light neck, with the shoulder well back, and the ribs springing round from the spine, showing a good breadth of back; length from the hip bone to the tail; hind-quarters long, extending nearly to the back; flank low down, near the milk-bag, which should be nearly level with the hock; fore and hind legs stout, but with small bones from the knee to the hoof; abdomen straight; head straight and rather up; light in the horns, which should project straight from the head, and turning in a

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little near the forehead; eye full, muzzle small; fore-quarters deep; thick through the heart; colors as in the male.

A Short Horn calf should have his bones well placed, without which the most careful feeding in the world would never make him a well formed animal when grown; shoulder slanting; carcass long, with good wide hip bones; long from the hip to the tail, with a square rump like an angle; length of quarter; legs short and fine in the bone; head neat and clean, and fine under the throat.

A good handler should have the skin rather elastic, with the hair loose, and a velvet-like feel to the touch. Some animals have a thick skin, and harsh coat; these are bad signs. If any black hairs are found about the head, or other parts, especially the muzzle, it is an indication that the animal is not purely bred."

The experienced breeder, or competent judge, need not have such descriptions as these above quoted to assist him in recognizing a superior animal, for there is something in the general outline, or figure, that at once attracts the practiced eye. A well bred Short Horn has an evenness of back, and a fineness of muzzle, and a peculiarity in the shape and curve of horn, which cannot be well described. A well bred animal is also remarkable for a breadth and depth of chest, and a fineness of limb and tail, which are not to be found in ordinary breeds.

In Europe the Durham cattle were for a long time considered tender and delicate, and "hard to be reared;" and these objections prevailed so much as for a time to prevent, or at least retard, the success of this excellent breed, but their good qualities at length overcame all opposition, and established them firmly in public favor. They appear to bear the climate well in every part of the United States, but it is evident they require more shelter and warmth than the Devons, and some other breeds. They are great favorites, and are being brought to great perfection in almost every State in the Union; and wherever they are raised, they amply repay the breeder for his outlay.

The following is a poetical description of the Short Horn cow, of the Durham breed:

She's long in her face, she's fine in her horn,
She'll quickly get fat without cake or corn;
She's clean in her jaws, and full in her chine,
She's heavy in flank, and wide in her loin;
She's wide in her ribs, and broad in her rump,
A straight and flat back, without even a hump;

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She's wide in her hips, and calm in her eyes,
She's firm in her shoulders, and thin in her thighs;
She's light in her neck, and small in her tail,
She's wide in her breast, and good at the pail;
She's fine in her bone, and silky of skin,
She's a grazier's without, and a butcher's within.

Some of the most prominent breeders of Short Horns and their grades in Michigan, are Messrs. J. B. & E. M. Crippen, C. H. Williams, and D. Littlefield, Coldwater, Branch Co.; J. Starkweather, D. M. Uhl, H. Welch and H. E. Degarmo, Ypsilanti, Washtenaw Co.; Silas Sly and J. S. Tibbits, Plymouth, Wayne Co.; M. Shoemaker, Jackson; Justus Gage, Dowagiac, Cass Co.; Hon. Kinsley S. Bingham, C. W. Green and Linus Cone, Oakland Co., and others.

Having now described four of the principal breeds which at present occupy the attention and stand high in the estimation of the breeders of England and the United States, we must pass over other breeds which are less worthy of note.

THE CATTLE OF SCOTLAND.

Although the improved breeds which we have just described, have been introduced extensively into almost every part of Scotland, still there are some excellent cattle which are peculiar to that country, and are well worthy of notice. Foremost among these are,

The Ayrshire.—This breed are so remarkable for yielding an abundant supply of milk, and are in every way so well suited to the dairy, that they are well worthy of notice. We have seen them in their native pastures, on the banks of the Clyde, and we have also noticed them in different parts of Europe and America, and in every place we found them to sustain their high character as milkers.

The origin of this breed has not been clearly ascertained, but it is very probable that they have sprung from the native stock of the country, and that their excellence has been obtained by good management in selecting and crossing the breeding animals.

The Ayrshire cow is not large, but her shape and figure denote that she is a good milker. It is a well known fact, that cows which have a tendency to become fat, are seldom well adapted for dairy purposes, as they do not yield much milk, and are very apt to go dry early in the season. The Ayrshires are good milkers, but they do not fatten readily, and on this account are objected to by many breeders. The Devons and the Durhams have a much greater tendency to fatten than the

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Ayrshires. The color of this breed is generally a yellowish red, mottled and spotted with white; the cows are remarkably quiet and docile, and when a large herd of them are feeding together, in the rich green pastures of their native country, their appearance affords as pretty a rural sight as can well be imagined.

The Ayrshires belong to the middle-horns. They have, for a considerable time, been considered as the best milkers of all breeds; but latterly they have been almost entirely superseded by the Durhams, on account of the latter breed combining in itself several desirable qualities. The beef of the Ayrshires, although of good quality, and possessing a good admixture of fat and lean, makes a poor return to the butcher, and is not in much request. It is said that an Ayrshire cow, of small size, will consume as much food as a large cow of the Devon or Durham breed.

Mr. Aiton, in his "Treatise on the Dairy Breed of Cows," thus describes the Ayrshire cattle: "The shapes most approved of are as follows: The head small, but rather long and narrow at the muzzle; the eye small, but smart and lively; the horns small, clear, crooked, and their roots at considerable distance from each other; neck long and slender, tapering toward the head, with no loose skin below; shoulders thin; fore-quarters light; hind-quarters large; back straight; broad behind the joints; rather loose and open; carcass deep, and pelvis capacious, and wide over the hips, with round fleshy buttocks; tail long and small; legs small and short, with firm joints; udder capacious, broad and square, stretching forward, and neither fleshy, low hung, nor loose; the milk veins large and prominent; teats short, all pointing outward, and at considerable distance from each other; skin thin and loose; hair soft and wooly. The head, bones, horns, and all parts of least value, small, and the general figure compact and well proportioned."

The cattle from which, by crosses with the native breed, the Ayrshire's sprung, were first introduced on Lord Marchmont's estates, in Berwickshire, and at Lornbergh, in Kyle. They attracted the notice of breeders, and their progeny were eagerly sought after. It was not until 1780 that the improved breed was properly estimated and established in Ayrshire.

The quantity of milk yielded by an Ayrshire cow is very large, for her size. Five gallons daily, for two or three months after calving, may be considered a fair average; she may be expected to yield three

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gallons daily, for the next three months, and one gallon and a half during the succeeding four months.

The quality of the milk is best known by the quantity of butter or cheese that it will produce. Three and a half gallons of this milk will yield one pound and a half of butter; twenty-eight gallons of this milk, with the cream, will yield twenty-four pounds of sweet milk cheese.

The advocates of the Ayrshire cattle state that they will fatten as well as animals of any other breed, and on this account strenuously recommend them to notice; but a little experience will show the fallacy of this representation, and prove, that whilst they excel for the dairy, they are not profitable for the grazier or butcher.

The following poetical description of the Ayrshire cow is not very flattering, but it is true:

A short and hard face, with a similar horn,
You rarely will fat her, e'en with cake and corn;
Rude coarseness of jaw, and hatchet-like chine;
Ever flimsy of flank, and a sugar-loaf loin;
She's flat in her ribs, low and flat in her rumps;
Her back thin and rugged—quite form'd of humps.
In her hips she is narrow—quite pert in her eyes;
Rough bones in the shoulders—like cats in the thighs;
Ewe-like in the neck—with her tail on her back;
Chest narrow and crippled, but the pail is her knack.
Of coarse and large bone—with a hard, wiry skin;
Without she's no grazier's—no butcher's within.

The West Highland cattle are considered to be regularly descended from the primitive stock of Scotland, they are thrifty and hardy, and the farmers of the Western coasts, and Islands of Scotland, value them highly and disapprove of mixing them with other breeds. We have seen some very good animals of this breed, but as a general thing, they cannot equal the improved breeds; they are course, fierce looking creatures, with long hair, and turned up horns. In several parts of Scotland, they have been brought to considerable perfection, by careful breeding, good pasturage and provender, but the general run of them are small and stunted looking, but very hardy and easily fed. In Ancient times, and we may say, in modern times, the cattle of England, Scotland and Ireland were not housed at all; they were wintered in the fields and supplied with fodder in the shelter of a grove, or near some thich hawthorn fence. When the winter was severe, great numbers of

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cattle and sheep died miserably from cold and hunger, and the animals that survived were stunted in their growth or become liable to diseases of several kinds. When the science of Agriculture began to be better understood in these countries, improvements of every kind were introduced; the cattle, which heretofore were exposed to the rigors of winter, were comfortably housed and regularly fed, and the manure which they produced, well managed, and applied to the tillage fields. The good results of such management became so apparent, that the improvements were not only universally adopted, but a very earnest rivalry took place among agriculturists, in the management of cattle and the raising of all kind of crops.

When Scotland and England were seperate kingdoms, they were nearly always at war with each other, and consequently there was no security for property, or encouragement for Agricultural improvements of any kind, as the rival armies frequently "crossed the border" and took possession of the cattle and other property of their antagonists.

When the two kingdoms were united under James the First, in 1603, there still remained many political questions which agitated the public mind, and diverted the inhabitants of Scotland from the pursuits of Agriculture, and it was not until the hopes of the Stuarts were finally overthrown at Culleden, in 1745, that true prosperity began to dawn on Scotland. At this period, Agriculture, which during the agitations of party, and the commotions of war, had been almost neglected, began to revive unwonted attention, and Scotland led the van in the march of Agricultural improvement, and even outstripped her great rival—England.

The cattle of Scotland, up to the era of improvement, were generally of an inferior description and best suited for mountain, or muir-land pasture, but afterwards a very great change for the better took place; the rich pastures of the lowlands were soon stocked with the improved cattle of England, or the progeny of the original breeds of the country, improved by judicious crossing and careful management, and the greatest attention was paid to every branch of rural economy.

The West Highland Breed may be considered the national cattle of Scotland, and until lately, they have been extensively diffused throughout the Highlands and the Islands on the Western coasts. They are of medium size and generally of a bluish-black color; they are esteemed

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highly for the dairy, but cannot possibly be as profitable to the farmer as the Devon, the Durham or the large Long Horns.

The same remarks will apply to the Polled cattle, viz: the Angus, and the Galloway. Each of these breeds have its perfections, which may be sufficient to recommend it to individuals, but none of them can ever be so far successful as to arrest the progress of the improved Durhams.

THE CATTLE OF IRELAND.

There is no country in Europe that has made greater improvement in the breeding of cattle, than Ireland, during the last sixty years, and this favorable result has been produced for the most part, through the instrumentality of Agricultural Societies, and among these, "The Royal Dublin Society" has been most conspicuous in forwarding the great work of progression. This Society has existed for more than sixty years, during which time it has enjoyed a Parliamentary grant of $25,000 a year, which sum is expended in maintaining a large establishment in Dublin and its vicinity. The Society has a well furnished Museum of Natural History, an extensive Agricultural Museum and a spendid Botanic Garden, but the most effectual way in which it has promoted Agricultural improvement, is by awarding *large* premiums for superior domestic animals of every kind, also for machinery, and seeds, fruits and vegetables.

Before the Durham Short Horns became established as a superior breed of cattle, Ireland possessed an excellent breed of Long Horned cows, which were remarkable for yielding an abundant supply of milk, and being easily raised.

The celebrated Long Horned Leicester cows of England, are said to have been derived from Irish stock; this has not been satisfactorily proved, but it is certain that the cattle of Ireland have been much improved by the introduction into that country of the Long Horned Leicester, and this was for a long time the favorite breed of the Irish land-lords and their most extensive tenants, but they have been almost entirely superseded by the Durham cattle, which are now brought to great perfection in every part of Ireland. An intelligent English gentleman who acted as one of the Judges at a recent cattle show in Dublin, says that Ireland is now beyond all question the "the land of Short Horns," and it is certain that it excels every other part of Europe, in the size

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and beauty of its Durhams, and at the great Agricultural exhibition at Paris in 1856, Ireland carried away more prizes, in proportion to the number of Short Horns exhibited, than England and Scotland together, and left Belgium, Holland, France and Germany entirely in the shade.

An Illinois "Cattle Improvement Society" have, within the present year, made some excellent selections of stock in Great Britain and Ireland; and among the rest, they have purchased some of the prize animals at the exhibition of the Royal Irish Agricultural Society, and have brought them into Illinois.

Until the Leicester Long Horns, and the Durham Short Horns, began to be the "rage," the cattle of Ireland were a mixture of several breeds, and were generally selected for their large size, and suitableness for the dairy, and after that for the grazier and butcher.

The Kerry cow is an animal which has been very much lauded by amateur farmers, and very little esteemed by those who have an eye to profit. The Kerry breed is a stunted and ill-thriven variety of cattle, whose native place is the mountains of Kerry. At the age of two or three years, they are smaller than a yearling of any of the large breeds.

Great numbers of these Kerry cows are bought annually at the fairs of Killarney and Fralee, and driven into the rich grazing counties of Limerick, Tiperary, the King's and Queen's Counties, and Westmeach, where they are bought up by the Aristocracy and wealty farmers, to be kept for the dairy, or fattened for the table. They produce excellent milk and make well-flavored beef. The Kerry has been erroneously termed *the poor man's cow*. She *is the rich man's cow*. The poor man generally rejects her altogether. He has in most cases to pay $15 for six months' grass for his cow, and he generally contrives to have an animal that will be able *to eat the worth of the money*, to yield him a large quantity of milk, and to bring a good price when sold to the grazier, or fattened for the butcher.

We have been particular in describing the improvement which has taken place in the cattle of Ireland, in order to show what great things can be accomplished through the instrumentality of Agricultural Societies, possessed of ample funds to carry out their plans. It is to be regretted that since the formation of the Michigan State Agricultural Society, more than $10,000 have been expended in erecting temporary buildings and fencing in the grounds for their annual State Fair. It is probable that if this sum had been invested in the purchase of land and

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the erection of permanent buildings upon it, the Society would be in a more flourishing condition than they are at present.

One thing is certain, that the Legislature cannot dispose of the public funds to more advantage than by granting to the State Agricultural Society a sum amply sufficient to provide a convenient site for their annual fairs, and to erect the necessary buildings and fences upon it.

THE CATTLE OF THE UNITED STATES.

In 1493, when Columbus made his second voyage to America, or rather to the West India Islands, he brought with him a few horses and cattle, and from that time until the present importations, of European stock have been arriving in almost every seaport of the United States and British North America.

The English colonists of Virginia brought over several cows with them. The Dutch West India Company introduced some horses and cattle. After the discovery of the St. Lawrence, and the exploration of the valley of that river, by Jacques Carter, the King of France sent a well appointed colony into Canada, and these emigrants were provided with a good supply of cattle and horses. From all these sources, the stock of the United States has been derived, and scarcely a year passes that some valuable animal is not imported from Europe for the purpose of improvement.

The hardships of hewing out a home in the forest, the frequent inroads of the Indians, and the wars with their French neighbors, occupied the attention of the early settlers of this country, and their descendants, so much, that they had not time to cultivate Agricultural improvement of any kind, and it was not until after the conquest of Canada by the English, and the successful termination of the was of Independence, that attention was given to the raising of superior animals and the improvement of Agriculture generally.

Ever since George Washington become President of the United States, the Agriculture of this country has been progressing in improvement. He was an eminent Agriculturist, and like some of the celebrated warriors and sages of antiquity, he devoted all the time that could be spared from the campaigns, or councils of his country, to the cultivation of his farm and the improvement of its soil. A few of the Presidents who succeeded the Father of his Country, seem to have taken their tone from him, and to have watched over the interests of

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Agriculture; but some of them appear to have neglected it altogether. Fortunately, their apathy was not sufficient to retard the progress of Agriculture, which went on steadily in its course of improvement, gathering strength as it went along, by the importation of superior seeds and fruits, the introduction of improved domestic animals, and the invention of labor-saving machines.

Within the ast thirty years a very great improvement has taken place in the domestic animals of the United States. Enterprising individuals, regardless of expense, imported from Europe a superior class of animals, for the purpose of improving the breeds heretofore existing in the country, or introducing new ones; and their efforts were so successful that wealthy companies have been organized for the same purpose. Among the most successful of these was the "Ohio Cattle Importation Society," which has introduced a number of valuable horned cattle, of the most improved breeds, and realized considerable profit by the undertaking.

The cattle of the United States are the progeny of animals which have been imported from nearly every country of Europe. The English brought cattle into Virginia, the Dutch into New York, the Spaniards into Florida, the French into Michigan, Louisiana and Illinois, &c., and the offspring of these cattle formed what is called the native stock of this country, among which some tolerably good animals were to be found. The grand improvement in American stock did not take place until the exertions of the Royal Agricultural Society of England, and the Highland Society of Scotland, had attracted universal attention to Agricultural improvements of every kind. The cattle breeders of the United States were not slow in taking lessons from these Societies, and profiting by their labors. They purchased many of the prize animals, and introduced them into this country, and this system of management having been carried on for several years, has tended to produce a very great improvement in the stock of this country.

The winters of the Northern, Western and Middle States are generally long and severe, consequently cattle must be supplied with artificial food and shelter for several months; and their ability to bear cold weather, and sustain themselves on ordinary fare, are very great recommendations.

It is a golden rule in the raising of cattle, "to produce the most at

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the least expense;" and as it is also a well established fact that "like will produce like," it is evident that if we try to be successful breeders of cattle, we must select the best animals of the most desirable breeds, and manage them carefully and economically.

The Durhams, the Devons, the Herefords, and the Ayrshires, have each perfections which recommend them to the notice of farmers; and so have also the grades or crosses of these breeds. Among the numerous varieties of cattle which constitute the stock of this country, exclusive of the improved breeds, some very good milkers are to be found, and also some valuable working cattle; but it should be borne in mind that no farmer can expect to obtain eminence as a breeder who does not keep the most superior animals as his breeding stock, and keep them in proper condition by the most unremitting attention to their wants.

Many persons suppose that it is not difficult to keep up a desirable stock of dairy cows, but a little experience in the matter would undeceive them; for it is not without considerable cost and judgment, and attention, that a number of cows, calculated to be profitable as milkers and breeders, can be selected and kept together.

Few persons estimate the superiority which some cows possess over others as milkers or breeders. It is often found to be the case that one cow will yield as much milk as two others, although they are all of the same breed, are fed on the same pasture, and are equal in age and size.

It is also well known that some cows, although excellent milkers, are remarkable for producing very small and indifferent calves; whilst others, which do not yield much milk, bring forth a healthy and vigorous offspring. It is now becoming an established fact among breeders, that cows intended for breeding *first-rate* stock, cannot be advantageously used for dairy purposes, as the continued and protracted milking tends to weaken the cow, and injure the calf.

If we are determined to be successful breeders of cattle, we must go about the matter in a proper way—select superior stock, feed them well throughout the year, *not* tax their powers too much by continual milking, and above all things, put them to the very best bulls that can be procured, and see that this is done *at a proper season*, so that the calves will be produced at a time when the strength of the dam can be sustained by abundance of nutritious food.

To keep the purest and best breeds, and to manage them carefully

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and judiciously, will not be sufficient to ensure success if we do not take the greatest care of the young animals in the first years of their existence. Many farmers understand well the breeding of cattle, but have not the means of carrying out their views or intentions; whilst others who have abundant means at their disposal, are ignorant of the correct principles of breeding, or careless about putting them into practice. Perfection should be aimed at in all cases, and those who have been the most successful breeders, afford the best models for imitation.

The in-calf cow requires peculiar care and attention; she should not be exposed to the attacks of vicious animals, of her own species or any other. Dogs have sometimes caused abortion in valuable cows, by frightening or worrying them during the period of gestation. We have known cows to be severely injured by others getting in and attacking them, whilst the former were tied up in the bales, and unable to defend themselves.

Youatt says truly, that the cow is more subject to abortion than any other animal, and it is a remarkable fact, that where one cow among a number slinks her calf, many others will surely follow her example. We have known a relative of ours, who kept a large dairy, to suffer a considerable loss by a great many of his cows "slinking" their calves, and this was occasioned by an ill-tempered care-taker, who kicked one of the cows for being a little refractory when "baling up." The injury thus inflicted caused her to slink, and a great many others followed her example.

We have known in-calf cows to be injured by being fed with turnips. This description of food caused the bowels to become too much relaxed, and this affection was transmitted to their offspring. They were always subject to diarrhœa, and never became good cattle. It is but fair to state that the turnips were White, Globe, Red Norfolk, and other soft kinds, and that a large quantity of them was given to the cows in order to save hay, which was very dear at that time.

With the cow, the usual time of gestation is from thirty-nine to forty-one weeks, but some cows take a much longer time. M. Tessier, in a paper on the gestation of animals, which he read before the Royal Academy of Sciences, at Paris, states that in 1,131 cows, which he had an opportunity of observing, the shortest period of gestation was two hundred and forty, and the longest three hundred and twenty-one days, which gives the very great difference of eighty-one days.

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Some breeders advise to have the calf removed from the cow as soon as it is born, and rubbed dry with hay or straw; but as far as our experience goes, we prefer to allow the cow to perform the drying process herself, and we have always permitted the calf to remain for a few hours with its dam, and to "suck" plentifully, as it is certain that the first milk, or "beesting," is necessary to clear the calf's intestines from the "meconium"—a substance which accumulates in the intestines of the calf during its confinement in the womb of its dam. As this milk is unfit for human food, for at least two or three days after the birth of the calf, the latter may as well have the benefit of it; but we do not approve of the practice of leaving the calf for several days with the cow, as in such cases both become troublesome when separated.

Some rural architects and builders erect sheds for calves in close proximity to the cow-houses; but this is erroneous management. The calves should be removed out of the sight and hearing of the cows; if such is not the case, much uneasiness and injury will be occasioned to both old and young.

REARING OF CALVES.

On this subject, Professor Johnston makes the following remarks in his "Lectures on Agricultural Chemistry:"

"While the calf is young, during the first two or three weeks, its bones or muscles chiefly grow. It requires the materials of these, therefore, more than fat, and therefore half the milk it gets at first may be skimmed, and a little bran meal may be mixed with it, to add to the casein or curd, out of which the muscles may be formed. The costive effects of the bran meal are to be guarded against, by occasional medicines, when necessary. In the next stage, more fat is required, and the third week, full milk, with all its cream, should be given, and more milk than the mother supplies, if necessary; or, instead of the cream, a less costly kind of food may be used,—oil-cake, finely crushed, or linseed meal, or even linseed oil, may supply at a cheap rate the fat which, in the form of cream, sells for much money; and instead of the additional milk, bran meal in large quantity may be tried, and if cautiously and skilfully used, its best effects on the size of the calf, and the firmness of the veal, may be anticipated."

Now, although this is the opinion of one of the most celebrated Agricultural Chemists, we should not like to follow it in every particu-

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lar; we should not like to give skimmed milk to the calf, at so early an age as that mentioned by the learned Professor.

Charles Beamish, Esq., of Cork, Ireland, is a distinguished Agriculturist; he has tried several interesting experiments, and his statements may be relied on. He fed calves very cheaply and successfully on a mucilage made of linseed and bran meal, prepared in the following manner:

Thirty quarts of boiling water are poured on three quarts of linseed meal, and four quarts of bran meal; all are then covered close up, and at the end of twenty-four hours, added to thirty-one other quarts of boiling water—then on the fire—being poured in slowly to prevent lumps, and well stirred with a small flat shovel-shaped board, perforated with holes to produce thorough incorporation.

After thirty minutes boiling and stirring, the mucilage is put up for use, to be given blood warm to the calves as soon as they are three days old, first in equal portions with new milk, increasing gradually to two-thirds as the calf gets older, substituting skim-milk after a month, and feeding on mucilage alone after six weeks.

Mr. Beamish says, that all the calves reared by him on this system grew well, were healthy and strong, and in good condition; and being fed abundantly three times a day, they were generally tranquil and contented, not sucking one another, as in the old system, and did not require separate cribs for their confinement.

The following table denotes the quantities of new milk, skimmed-milk and mucilage used in the feeding of each calf, for a certain number of weeks:

Week.	New Milk.	Skimmed Milk.	Mucilage.	Total.
1st,	22	--	10	32
2d,	21	--	21	42
3d,	20	--	29	49
4th,	20	--	36	56
5th,	--	20	43	63
6th,	--	20	50	70
7th to 15th,	--	--	756	756
	83	40	945	

The cost of this mucilage is about one and one-half cents per gallon. It is evidently the best mixture for the feeding of calves that has yet been discovered, and is well worthy of a fair trial by every farmer.

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The description of beans used in making this mucilage was the Egyptian, which, perhaps, could not be easily obtained in this country; but it is likely that corn meal might be substituted for the beans.

We have frequently raised calves successfully by giving them new milk for at least a week, and after that a plentiful supply of skimmed milk, given twice a day, at regular intervals. A suitable pasture of sweet and tender grass is requisite, and they should be enclosed within moderate bounds.

The cost of raising calves has been estimated variously. It generally depends upon the price of provender and labor in the locality in which they are produced.

Mr. D. Caldwell, of Essex Co., Mass., estimates the cost of raising a calf until it is three years old at $26 50, and the animal must be large, and in good condition, to bring that money. He says that ordinary cattle do not pay for raising when pasturage is so high as it is in that vicinity, and most farmers have abandoned the business. To teach calves to eat grass, hay, roots, or meal, at an early age, it is recommended to give them about half a feed of milk—say at the age of three or four weeks—put finely cut roots into their mouths til they chew, or swallow without chewing.

Mr. Joseph M. Dudley, of Madison, Conn., says that in that locality it costs about $20 to rear a calf until it is three years old, and a steer of that age is worth $25.

Col. B. F. Bridgeman, of Bledsoe Co., Tenn., states that the cost of raising heifers or steers, until they are three years old, is about $7 50, and they are sold at that age at $10 each.

Examples to show the very great difference that exists in the expense of raising cattle might be multiplied, but those which we have quoted will suffice.

All the Agricultural exhibitions, periodicals, &c., will be of little avail in forwarding the improvement of cattle, unless the farmer perceive that it is *his interest* to incur a little extra expense in procuring good animals, and keeping them in proper condition.

Some persons suppose that by importing superior stock from Europe, they will all at once fall into the knack of breeding, &c.; but in many cases imported cattle disappoint the expectations of their owners, as they have been reared in a mild climate; for the most part, have be-

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longed to men of wealth, who spared no expense in bringing them to the highest perfection. Their provender in winter, and their pasture in summer, have been of the richest and best description, and nothing was omitted that money could procure, in order to make them up for sale, or exhibition. It is not to be wondered at, then, that in this country the great heat of summer, and the cold of winter, have an injurious effect on these tender animals, and that they are unable to bear the extremes of heat and cold as well as cattle which have been inured to the climate.

The improvement in all the domestic animals has been progressing rapidly in the United States, especially within the last few years, and there is every reason for supposing that this state of things will continue. If the principal Agricultural Societies would offer much larger premiums for Short Horn cattle, such an arrangement would have a very great tendency to increase competition, and to promote improvement.

A great many cows are kept by milkmen in the vicinity of large cities, and as these are only valued for milk, and their owners take every means in their power to get the greatest amount of this article from them, it cannot be expected that they will produce calves of a superior quality; but the farmer who lives far from the milk market, and finds it his interest to breed good calves—to rear them carefully, and to keep a first-rate stock of milch cows—should strain every nerve to obtain the services of a first-rate bull, for it is certain that calves in a very great degree partake of the qualities of the sire.

When a farmer takes grain of any kind to market, he finds the benefit of having a good article; he sees how readily he can dispose of it; in fact, how eager buyers are to get it; he experiences the benefit of having paid an extra price for good seed, and having kept his crops perfectly free from weeds, and he begins to congratulate himself on the wisdom of his outlay. It is exactly the same with the breeder of cattle. When he comes to sell his stock, he finds he can dispose of well bred animals readily, and obtain a high price for them; but that it is difficult to get rid of inferior animals, and to obtain a remunerative price for them is out of the question. These facts are every day apparent in the large cattle markets of Europe, where a great quantity of stock are exposed for sale. The attention of buyers is attracted at the first sight of a lot of superior cattle, whilst the owners of inferior animals find them-

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selves and their stock neglected, and often doomed to return home in company.

Although the cattle of the United States are very numerous, and consist of almost every breed and grade, there are only four breeds among them that are worthy the attention of the breeder, and these are the Durhams, the Devons, the Ayrshire and the Hereford ; and in fact the two first mentioned may be said to be better suited for this country than any others. The Durhams are good milkers and remarkable for their size and beauty. The Devons are very hardy and thrifty, are extremely well adapted for the labors of the field, and have a tendency to fatten and make good beef. The Ayrshires are good milkers; they are well adapted for the dairy, but very little can be said in their favor. The Herefords are large, and make tractable working cattle and beef; but the cross of that breed are bad milkers, and unsuited for the dairy.

The most successful breeders in Europe devote themselves assiduously to the work of improvement. They meet with many disappointments and vexations, but they are not discouraged; they persevere and their exertions are ultimately crowned with success. Robert Bakewell was forty years in bringing the Leicester sheep to the high degree of perfection which they had attained at his decease; and he also spent many years in the development of that much celebrated breed of cattle the Leicester Long Horns; and his example has been of incalculable benefit in the British dominions and the continent of Europe. Many eminent breeders in Great Britain and Ireland were induced to follow in Bakewell's footsteps, on account of the very great success that crowned the exertions of that fortunate breeder, and they, too, have accomplished much, both for themselves and others.

There are many American farmers who possess ample means of obtaining wealth and celebrity by becoming breeders of superior animals, and that several are doing so, there can be no doubt. Within a few years a wonderful improvement has taken place in all the domestic animals throughout the States of New York, Massachusetts, Pennsylvania, Vermont, &c. That Michigan is following the example of her sister States, is evident from the very creditable display of horses and cattle which she makes annually at the State and County Fairs; but it is to be regretted that many farmers are too well satisfied with things as they *are*, and are not disposed to trouble themselves about *things as they*

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might be. Every breeder should bear in mind that a worthless animal of an inferior breed will consume as much food as a valuable animal of the best and most approved breed, and this fact ought to be sufficient to stimulate the farmer to get rid of all inferior stock, and keep *none but the very best.*

MANNER OF ASCERTAINING THE AGE OF CATTLE.

Although the ages of cattle may, in some cases, be ascertained by the horns, still we cannot always depend on the accuracy of this criterion: for, in some cases, a ring appears on the horn at the age of *three years*, in others not until *four*. In general, the safest method of proceeding is to count the first ring *four*, and to add *one year* for every succeeding ring.

Youatt states that the new-born calf presents an uncertain appearance, depending on the mother having exceeded or fallen short of the period of gestation. Sometimes there will be no vestige of teeth, but generally two central incissors will be protruding through the gums, or they will have arisen or attained considerable bulk. Notwithstanding the opinion of this celebrated authority, we venture to say, that in the generality of cases, it will be found that the majority of calves at the time of their birth, will have the full number of incisors visible, provided they have come to their full time. Yet some have but two incisors when born, yet two more in a week, two in a fortnight, and do not get the full number until they are a month old. These teeth continue to increase in size for five or six months; after that they rather appear to be stationary until the animal is one year old; and from that period until the close of two years, from the increase of the size of the jaw, the teeth appear *to be diminishing in size.* When the animal is two years old, two new teeth make their appearance; when these are nearly full grown, two others follow, which indicate the third year of the animals age; and before the fourth year, there will be six permanent incisors; at about five, the fourth pair will be pretty forward; and at six, what is called *a full mouth* is presented; at seven, the hollow or groove contained in the center will have begun to disappear; and from that out, there will be a difficulty in ascertaining the age. At eight years, the two central teeth will appear the smallest of the set, and the two marks are rubbed into one in all except the corner teeth.

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At ten, the four central teeth will be diminished in size, and the marks will have become smaller and fainter.

At eleven, the six central nippers are smaller than the two exterior ones, and at twelve all the teeth appear to be considerably shrunken and diminished, and continue to decline for the remainder of the animal's life.

Experience tells us that these rules are not always to be trusted, as much will depend on the *kind of pasture, or description of provender*, on which the animal is fed. A cow fed on a bare, sandy pasture, will get a bad mouth much sooner than one kept on a rich and good one, and an animal fed on the refuse grain of breweries or distilleries, will present as bad a mouth at the age of *six*, as she would *at twelve*, if fed on a rich pasture and hay.

Few farmers are aware of the difference in the period of teething that exists between the various breeds of cattle, and of the influence which early weaning and various kinds of provender have on the dentition of all the domestic animals, but more especially on that of the cow. On this subject, the following illustrations will be interesting to every Agriculturist:

In 1846, a bull, of the Durham breed, purchased at the dairy of the Royal Stud, at Pin, in France, was sent from Arras to St. Omer, in the beginning of June, to be sold there at the public exhibition.

On the sixth of June, the animal was presented for adjudication, at the court of the sub-prefecture, in the presence of a great number of farmers, who were all eager to do justice to his fine shape, combined with a coat (bay) to which they gave a decided preference; at the same time, that they all refused to award the prize to Antinous, because the conditions specified that the candidate should be but two years old, whereas, from the inspection of his teeth, he was declared to be *four years old and upwards.*

Several veternarians, formerly pupils of Alfont, came forward and corroborated this opinion, declaring that the bull possessed all the teeth of an adult—*all his permanent teeth.* The consequence of such unanimity of opinion was, that it was found impossible to come to adjudication, and the more so, because in the district of St. Omer, the custom is that none but very young bulls should serve cows.

The conditions obliging the highest bidder to keep the bull for four

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consecutive seasons, for covering, it was not to be supposed that the farmers would depart from a regulation, when such an age appeared proved by the state of the mouth; and in fact, vainly were they solicited to do so, by the representations that in England and many parts of France, excellent progeny was got at a more advanced age.

This difference of opinion and discussion led to a full inquiry into the age of Antinous, and the result was, that it was satisfactorily proved *that he was only two years old.*

To a letter of inquiry on this subject, Professor Eugene Renault, President of the Royal Veterinary College, gave a reply, of which the following is a summary:

Uniformly where the ox species has experienced the ordinary kind of management and feeding; wherever food, however good, has been given as ordinary nutriment, and not for forcing or fattening, in all such parts of the country, dentition follows the ordinary course, as indicated by writers on the subject, and we may, without any danger of erring, lay down the ages of such animals by the following rules:

"1st. From the age of eighteen months to two years, the front temporary incisors are shed and replaced by the permanent incisors.

"2d. From two years and a half to three years, the middle temporary incisors are shed and replaced by the middle permanent teeth.

"3d. From three years and a half to four years, the second middle incisons are shed, and are replaced by the second middle permanent incisor teeth.

"4th. From four and a half to five, the corner temporary incisors are shed and replaced by permanent teeth."

But these rules, the result of long and accurate observation, and correct and well founded at the time *when*, and in the countries *where* they were made, are no longer applicable and true, in regard to certain individuals and certain breeds.

Of all the known bovine race, the English Durham breed is unquestionably the most remarkable for precocity of development; its property of fattening quickly, and reaching full growth at an early age, constitute its character and recommendation.

It is equally notorious, and cannot be denied, that this property, which has been conferred on the breed solely by good food and abundance of it, would speedily degenerate and in the end become lost, if those destined to perpetuate it, or their offspring, were not themselves

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maintained in the same condition by alimentation as that which produced it in the first instance. Now such is precisely the case with the Durhams, and those most resembling them, especially in the precocity, which may be observed in the evolution of the permanent teeth.

The result of certain observations made by two individuals, specially located in situations the most favorable for clearing up the questions are:

1st. That in general, the progress of dentition is more actual, and that the permanent teeth, especially, are cut earlier in Durham cattle than in our indigenous breeds.

2d. That most of the bulls of the Durham breed get all their permanent teeth at their fourth year at latest, and that it is not a rare thing to see the whole of the permanent teeth at three years old, and even earlier.

3d. That henceforth we shall be liable to great errors in pretending to estimate the age of such animals, according to rules laid down by authors.

Our own observations go to prove that an abundance of good food, at an early age, has the effect, at the same time that it accelerates the growth of the individual, of equally hastening the evolution of the dental organs, and so producing the same precocious mouth that we find in the Durham breed.

M. Masse has a bull of the Charoloise breed, having a fourth of Durham blood, which had all his permanent teeth at the age of two years and ten months. He had likewise, in his pastures, another ox of the same breed and pure blood, born some days after the former, but brought up in the same manner, (that is, by a forcing aliment,) which has now (the 24th of September,) lost its last milk tooth, and consequently *has got a perfect mouth at three and a half years old.*

M. Masse is of opinion that generous and substantial feeding, at an early age, has special influence in creating early dentition, and what to him appears corroboration of such an opinion is, that oxen destined for labor, who, unlike those put up to be fatted, are not well fed at this early age, *do not exhibit the same precocity.*

Another remark made by this celebrated breeder is, that winter feeding, in particular, hastens the fall of the temporary, and the issue of the permanent teeth; and among other facts in support of this opinion, he

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cites the case of two bullocks which he sent, in 1845, to the show at Poissy. These animals, in the space of four months, (from October to February,) lost each their four posterior temporary teeth, which were immediately replaced by the permanent ones.

M. Tourrest, another skillful breeder, writes on this subject thus: "In Allier it is the custom to wean the calf at an early age; at two or three months old, and sometimes at six weeks, it is taken from the mother. Now, in our country, it is rare to see an ox at five years old, or even at four and a half, retain any of his milk teeth; there are very few that have not full mouths at 52 months; but this rule only applies to oxen of the Bourbonais breed.

"For you must know that our farmers in Allier go in search of the finest produce of the Haut-Vienne and Dordogne, to work their heavy and alluvial lands. Now the ox coming from these countries, the Limousin ox, who is strong built and a good worker, is very late in coming to perfection. He sucks for five or six months, and not until this age is he put to any food that requires mastication, and consequently he does not get his teeth for a much later period than the Bourbonais animal; in general, not until the fifth year, and it is by no means rare to discover milk teeth even at a later period."

M. V. Yoert, Inspector General of Veterinary Schools and Royal Sheep Folds, President of the Board of Judges, at the show at Poissy, mentions that in his tour of inspection through different parts of France, as well as at the market and show of fat beasts at Poissy, as well as in several parts of England, he has observed numerous instances of precocious dentition, which he does not hesitate to ascribe to peculiarity of breed and difference of provender.

As the best mode of ascertaining the age of cattle, and an intimate knowledge of the causes which interfere with the regular development of dentition, are essential for every breeder, we have given the opinions of the most celebrated judges on these subjects.

That the effects of cold are highly prejudicial to the health and fattening of animals, is a fact of the truth of which almost every farmer is aware; yet, comparatively speaking, few take proper precautions to provide suitable shelter for their cattle or sheep. Some persons confine their cattle in close, dark houses, where they are thus deprived of two

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very essential things—air and light—whilst others allow them to look for food and shelter at the sapless straw stack.

Animals should always enjoy abundance of pure air, and it is to the want of it that many of those epizootic diseases, which have been so fatal to European cattle, may be attributed. Several European farmers, especially those of the poorer classes, confine their cattle in close-stone-built houses. These places are often without proper ventilation, or sufficient light, and in them generally commence those contagious disorders which sometimes devastate kingdoms, and require all the energies of the authorities to arrest their progress.

Not long ago, the Board of Health of the city of Paris stated in their report that the epizootic diseases are generally less fatal than the epidemics. Nevertheless, as they sometimes affect the animals which serve for the nutriment of man, and that apart from this consideration, they may have grave consequences for the public health, they have engaged the care of the Council. An epizootic was reported to the administration, which had prevailed among the cows of the communes around Paris, and which caused a great mortality. The researches of the Council established the fact, that this epizootic was only a chronic disease, a true pulmonary phthisis, to which has been given the appellation of "*pommeliere*," and by which the greater number of cows which fill the stables of Paris and its environs, had been attacked.

The Council discovered that the principal cause of the evil was to be attributed to the vicious regimen to which their animals were subjected.

It is known that they pass part of the year in stables perfectly closed in which the space is not proportioned to the number of animals, and in which the vitiated air is renewed with extreme difficulty, and the heat is sometimes suffocating.

It is also known that they pass *suddenly* from the stable to the pasture, and that in this change they go from the hot and hurried atmosphere of the stable to a sudden exposure to the variations of the climate. This alteration of food, and transition from heat to cold, operates as a very powerful cause of disease; but as the evil does not announce itself in a very violent manner, as its progress is not very rapid, and as there is even a period in the disease when the animal is disposed to get fat, the cow-feeder, who knows at what time to get rid of her, sells her when she is ready to calve.

It is within a radius of thirty leagues from the capital, that animals

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of this kind are purchased by the jobbers who supply the milkmen of Paris with cows. These they hold on for some years, if they are properly cared for, but in general they are kept in stables which are not sufficiently large and airy, and where they are exposed to the same evils which gave rise to the malady. In such cases the "phthisis" arrives at its last stage, and carries off every year from Paris and its environs a great number of cows.

Although there is not much danger of the American farmer's cows being too closely confined, or suffering from want of air, it is a fact that the milkmen who supply large cities, frequently keep large numbers of cows in almost the same state and condition as those we have described; and as it is certain that when a disease once commences it is likely to spread over the whole country, the necessity of precaution is evident—the authorities should give this matter due attention, as "prevention is better than cure."*

Some persons may think that the cattle of the Western States have already sufficient ventilation, through the chinks and joints of the logs and shingles which compose their sheds, and it must be confessed that this is true, and that they sometimes experience "too much of a good thing," in the shape of a chilling breeze; yet, still it must be allowed that in this country great numbers of cattle are confined in sheds from which *light* is wholly or partially excluded, and light has a greater influence on the health of all animals than many suppose, as the following illustrations will show:

Sir James Wylie mentions a remarkable instance of the influence of light. He states that the cases of disease among the houses on the dark side of an extensive cavalry barrack at St. Petersburgh, have been uniformly, for many years, in the proportion of *three to one* of those who resided on the side exposed to a strong light.

Light has a powerful influence on the health of the human subject, as the following will show: The late Baron Dupuytren, one of the most eminent surgeons of Paris, mentions the case of a lady whose maladies had baffled the skill of the most eminent practitioners. This lady resided in a dark room, into which the sun never shone, in one of the narrow streets of Paris. After a very careful examination, Baron

* Since this Essay was written, a full exposure has been made in Frank Leslie's Illustrated News, of the abominable practices of the milkmen of New York, the disgusting swill-milk disease, and the effect of the loathsome milk on the community.

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Dupuytren was led to refer her complaints *to the absence of light*, and recommended her removal to a more cheerful situation. The change was made, and was immediately followed by the most beneficial results; all her complaints vanished.

Diseases which arise from a want of ventilation, are sometimes perfectly cured, and entirely removed, by the admission of a plentiful supply of fresh air. A few years ago there was a great mortality among the horses of the British cavalry, in some of the barracks near London. On investigation, it was found that the disease which proved so fatal was caused by imperfect ventilation. The defect was remedied, and the mortality immediately ceased.

Professor Johnston mentions the following case, which is worthy of attention: An agriculturist had a number of sheep housed, and fed them on Mangel Wurtzel, but a great many of them sickened and died, and he declared that it was the food that had killed them. A veterinary surgeon, however, who happened to be aware of the consequences of defective ventilation, pointed out the remedy—a better ventilation for the sheep, which were over-crowded. The defect was then remedied—the sickness and mortality ceased—the sheep ate well, and throve upon the Mangel Wurtzel.

ON THE NECESSITY OF REGULATING THE TEMPERATURE OF THE HOUSES OR SHEDS.

By an acquaintance with the laws relative to heat, and its phenomena in connection with physiology, we discover that if the temperature of the building in which our cattle are placed is too low, then the proportion of food which they consume is much greater, and that this increased amount of provender does not tend to increase the fatness of the animal; but when due attention is paid to *equalizing the temperature of the building*, we find that corresponding benefits arise to man and beast, inasmuch as the latter not only requires a less quantity of food, but that the animal duly increases in value directly in proportion to the amount of attention given to this matter.

The attention of farmers should be directed to this important subject, and particular care should be taken that, whilst sufficient ventilation is provided, the animals should be kept at a desirable temperature.

The reason why cold retards the fattening of animals has been well explained by Dr. Lyon Playfair, in the Journal of the Royal Agricul-

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tural Society of England. He says that when the chemical power, oxygen, succeeds in effecting a waste of the body, it converts it into the elements from which originally it sprung *into carbonic acid, water and ammonia.* There are, indeed, intermediate compounds formed, but these are the final products of the decay of the body, or of its parts, and these are the very substances on which plants live; so that decay and death actually become the source of life. It is well known to philosophers, that the vital forces decrease when the body is exposed to a certain degree of cold; and that when this is sufficiently intense, that they are either suspended, or actually annihilated. But the chemical force, oxygen, is condensed or increased by such agencies, and it therefore reigns triumphant. Vitality (the cause of increase and of sustetenance) being removed, chemical affinity, which is the cause of waste, acts upon those tissues which have been freed from the dominion of vitality, and effects their destruction. *Hence it is that cattle do not fatten so well in cold weather as in hot.* The chemical powers being now in the descendant, prevent the increase of fat. We know, also, that the intervention of cold weather in summer retards the fattening of our cattle. But as the decrease of vitality has been occasioned by the diminution of the temperature of the body, it is obvious that by an elevation of the temperature, vitality would be again enabled to resume its proper functions. It has been shown that the food of various countries is more or less combustible, according to the temperature of the climate; and proofs were adduced that the amount of the food consumed varied also according to the temperature. The amount of the animal heat must be duly preserved in all climates. If, therefore, we want to keep up in winter the vital functions of our cattle in a proper degree of activity, *we must keep up the heat of their bodies;* and this we can do in two ways—we may either give them more food, or we may protect their bodies from the cold. Warmth is an equivalent for food, which may thus be economized.

In severe winters, all the domestic animals of this country suffer more or less from want of shelter and warmth. An immense quantity of food might be saved annually by keeping the animals warm.

HOUSE-FEEDING OF CATTLE.

Many modes of house-feeding cattle have been from time to time invented, and brought before the public; but the great cardinal rules which are necessary to ensure success are these:

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1st. To bring the cattle into proper condition in the pasture before stall-feeding is commenced.

2d. Provide a house suitable for the purpose, in which the animals will have good air and light, and can be kept in a proper temperature.

3d. Prepare the food properly before it is given to the cattle. Cut up the hay with a machine; and if you feed with oil cake, or corn meal, make "mush" of it before you use it by mixing it with hot water.

4th. Feed at proper intervals, and take care to be as regular and punctual as possible.

5th. *Take care that the food which you are using does not produce relaxation of the bowels; if it has that effect on your cattle, they will fall away, and all your outlay will be lost.* If any such symptoms appear, you must immediately correct the evils by giving astringent food.

We have frequently fattened cattle on ruta bagas and hay, but we have always taken care to have the animals in good condition—nearly fat before they were put in, as when they are poor and lean it is very unprofitable work *to try to fatten them* with artificial food.

In every part of Great Britain and Ireland, labor is cheaper, and manure is more valuable, than in America; yet in these countries the profits of stall-feeding are very small, and few farmers would undertake the operation were it not that the manure thus procured is extremely rich, and an excellent fertilizer of the soil.

This process also enables the extensive farmer to *finish off* a prime lot of heifers or oxen—that is, to make them up properly for the market, and to keep them on hand until it is in a favorable state to ensure him a good price.

The farmer who puts in a lean and ill-conditioned animal for the purpose of house-feeding, miscalculates the difficulty which he undertakes, and not until a large quantity of feed is consumed will the real truth become known to him. The animal before it is put into the house, should be as fat as a good pasture can make it, and the very best description of roots, hay, or meal, should be kept for the finishing process. Whole turnips, pumpkins, &c., may do very well as long as they last. They will not *fatten*, but they will assist in bringing the animal *on* a little, and in sparing the real fattening food, which will be required to finish off the process. Cabbages, pumpkins and white turnips should be used while they are in season. They will go to loss if not used in

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proper time, whilst ruta bagas, potatoes, parsnips, mangel-wurzel, &c., which are good fattening food, will keep as long as they are required.

Cattle have large, capacious stomachs, which they fill with a large quantity of grass, when they are in pasture. They require something bulky to fill their stomachs, when they are being house-fed. A certain quantity of hay should always be given them to make bulk, assist in distending their intestines and regulating the bowels.

Corn and cob meal is good feed, and not being so dear as pure meal, it may be given in large quantities.

It is absurd to prescribe the exact quantity of food that should be given to a stall-fed animal. One ox or cow sometimes requires nearly twice as much food as another, and this difference does not arise from the size of the animals.

Regularity in feeding, and plenty of substantial food, are the two most important requisites in stall-feeding; and perfect cleanliness and an agreeable temperature are very essential to success.

House-fed cattle are subject to a troublesome itchiness of the skin, on account of the dust and dandriff which accumulates in the hair. The best remedies for this complaint are the curry-comb and brush. These will afford unfailing relief, and at the same time improve the appearance of the animals by removing all loose hair and making the coat smooth and glossy.

A well regulated feeding-house is a pleasing sight. Cattle sleek, clean, fat and contented-looking; litter dry and in its proper place; channel removing the liquid manure free from obstruction of any kind; droppings removed the moment they appear, and added to the well-formed manure heap—and everything in fact bearing the stamp of order and thrift.

We have frequently made use of the turnip-cutter for the purpose of slicing turnips and other roots for cattle, and found the animals seemed well pleased with the food prepared in this way. Some prefer to give the roots whole. As we have used turnips both ways, we are qualified to speak from experience on this subject. When the turnips are sliced, the cattle find it very easy to consume them; need not use much exertion in chewing them; and consequently get fat soon when using food thus prepared; but they are sometimes liable to be choked by small pieces sticking in the gullet, as they often venture to swallow small slices without chewing them. When whole turnips are used, the

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cattle are compelled to bite and scoup them out gradually; and as they take small bits at a time, there is no danger of choking, which is a great advantage.

We have frequently watched a cow feeding on whole turnips, and observed that at such times she showed great anxiety, and used much exertion. The turnips would roll away from her—she would make another attack—and having succeeded in seizing it, would press it against the wall of her crib or stall, and scoup it out bit by bit. We have observed cattle feeding on sliced turnips, and have seen that they needed no such exertion. They found no difficulty in masticating the food, and being free from uneasiness of every kind, they became fat soon; but as we have mentioned before, they were subject to injury from swallowing small slices without having chewed them. We have frequently relieved cattle in this predicament, and saved their lives, by using the flexible tube or probang, and *forcing down* the obstruction. It is, however, necessary to observe caution when using this instrument, as the throat of the animal is in some cases injured by it, and inflammation apt to follow.

Mangel-wurzel is considered to be the best kind of food for milch cows, as it induces a copious secretion of milk, and does not impart an unpleasant taste to the butter. White and red beets are nearly allied to mangel-wurzel, and partake of its properties. Parsnips, carrots and potatoes may each be used with good effect in feeding. We have frequently seen cattle fattened well on raw potatoes, sliced with a machine, and given three times a day, at regular intervals, a plentiful supply of good hay being also used.

Green feeding, such as clover, rye, vetches and grass, are valuable for sustaining house-fed cattle in summer. Cows fed on this kind of food will yield much milk, and produce a large quantity of valuable manure.

Oil cake is not much used in the United States. It is made of the refuse of the oil mills, and is excellent feeding for cattle, as its fattening properties are very great, and it imparts a fine gloss to the coat, and richness to the manure, which are very remarkable.

In England, the landlords are so convinced of the value of oil cake as a fertilizer, that several of them, when letting lands to farmers, introduce clauses into the leases binding the tenant to use a certain quantity of oil cake in feeding cattle, the landlord agreeing to pay half the expense of providing this food.

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ON THE MANAGEMENT OF MILCH COWS.

Having had much experience in the management of milch cows, and the manufacture of butter, we conclude that the principal requisites for success in that line of busines are as follows: To select young and healthy stock, which exhibit the particular points of good milkers—large udders, dugs well on, lacteal vessels full, skin thin, coat fine, countenance mild, horn not too white. Nothwithstanding their being possessed of all these good points, it will be vain to expect them to milk well if they be not provided with *first-rate pasture, and the purest and best water.* Well-flavored butter was never yet procured from the milk of cows which had been compelled to drink impure water. Milch cows should be kept as quiet as possible—not fretted or harrassed in any way; should not be driven too fast, or frightened with dogs, &c. The milk should be carried to the dairy *quietly*—should not be much shaken or disturbed, and it should be set before it has cooled.

A neighbor of ours kept one hundred milch cows, and managed them, his dairy and his young stock, in the most superior style. He selected the Durham breed, and he always endeavored to keep up a stock of well-bred animals, or at least, to have others as near the mark as possible. He kept two first-rate bulls, and these, besides serving his own cows, were allowed to serve a certain number belonging to the farmers of the vicinity. The money received from this source was sufficient to defray the cost of supporting the bulls.

The farmer we allude to, having plenty of good pasture, and abundance of provender, his cattle were well fed all through the year. His barns and sheds were fitted up with every kind of accommodation that could add to the comforts of the animals and minister to their wants. Each cow had a little manger or feed-box, neatly flagged, in front of her bales, and partitioned off from her fellows. Cattle frequently annoy each other, whilst they are feeding, by striking with the horns, or snapping away the food. This propensity was effectually prevented by the divisions alluded to. The quantity of milk given by each cow *was accurately measured at each milking, and an exact registry kept of it. This arrangement, whilst it proved an effectual check on the milkers, and made them perform their work carefully, was also a good means of ascertaining the state of the cow's health; for a falling away in*

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milk, was a sure symptom that something was wrong, and the attention of the proprietor was immediately attracted by such an occurrence.

The milk vessels used in this dairy were wide and flat, and were made of zinc. Their dimensions were 5 feet in length by 2½ feet in width. They were very shallow, as the depth of milk in them was never allowed to exceed two inches, and was very often considerably under that mark. The vessels were marked with a scale, so that the numbers of gallons of milk in them could be ascertained correctly. The Skimmers were flat ladles, made of zinc, and perforated with holes, to allow the milk to escape from the cream.

Some persons disapprove of zinc and consider it poisonous; but we have never seen any bad effects arise from the use of it, nor can there be any, if the vessels are properly cleansed.

The churning was performed by machinery—the quantity of butter produced was generally about 100 lbs. at each operation. This was always well washed, with clear spring water, and this washing continued until the water came off *without any sign of milk*. After every drop of water and milk was pressed out, by repeated workings with a wooden ladle, the butter was lightly salted with good salt, ground fine and well-dried before it was used; (bad salt will injure butter and spoil its flavor.) When the butter was thus prepared, it was packed in firkins made of seasoned white ash, and calculated to hold 84 lbs. each, and a little brine being poured on the butter, it was stored up until a large lot was ready for market.

The packing into firkins should be performed with care, and no cracks or fissures of any kind allowed to remain along the sides of the vessel. We have frequently had butter made in the manner described, and we have always found it to keep remarkably well. Many persons disapprove of using water in the manufacture of butter, and never wash it, but press the milk out of it by careful workings. We have frequently seen excellent butter made in this way, but scarcely think that it would "keep" so well as that which has been well washed with clear spring water. It is certain, that if good water cannot be procured, it is better not to use any in the process, for impure water would make any butter inferior and ill-flavored.

A relative of ours kept 60 milch cows, and as he managed his dairy well, and always got the *top price* for his butter, we will describe his system:

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His cows were selected on account of their large size and milk-denoting points; but he always kept an excellent Durham bull for the purpose of improving his stock, and the calves generally partook of the sire, so that the stock was improving yearly.

The vessels used in this dairy were made of oak, and were always kept scrupulously clean. No ill taste was ever perceivable on the milk or butter, because the ventilation was perfect and the water always fresh, cold and clear. The churning was done by machinery, and the quantity of butter produced was generally 84 lbs.,—the amount necessary to fill a firkin. At some seasons, particularly after a sudden transition from fine weather to the reverse, there may be a shade of difference in the color of the butter. It is therefore necessary that a cask should be filled at each churning. After every trace of milk had been washed out of the butter, it was salted carefully and evenly, and packed tightly into firkins made of white ash—it is said that oak or pine give an unpleasant taste. Butter managed in this way will keep perfectly sweet for six or eight months.

Both the dairies we have just described were extremely clean, and their temperature was regulated by a thermometer. Stoves were used to keep a proper degree of warmth in the fall and early winter; but in mid-winter the diminished stock of milk was removed to a smaller apartment, where a proper temperature could be more easily sustained.

The cows of both these dairies were always carefully housed from November until May, and fed during the greater part of this time on oat-straw. They were turned out to pasture every day, except when the ground was covered with snow. At such times, they got a plentiful supply of hay, and those which were giving milk during the winter were fed with turnips, mangel-wurzel, or bran-mashes. In March and April the cows were fed with hay, as it is always necessary that they should be strong when turned out to grass. A certain portion of waste grass, or inferior meadows, was always spared for winter pasture; and this is very beneficial at this season, and the cattle are very fond of it.

Some cows are much more valuable for the dairy than others, although there may not be much difference in the quantity of milk yielded by them. One way of ascertaining the quality of the milk, is as follows: Provide a number of half pint glass vials—corresponding

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with the number of cows in the dairy—label and number them consecutively, 1, 2, 3, 4, &c., and the cows to correspond. Fill each vial with the milk of the cow bearing the same number as the vial. Note down the quantity of milk each cow gives. After the milk has stood in the vials, the eye can easily discriminate the amount of cream that each produces, which mark down by sixteenths of inches. Pursue the same plan at the next milking, about the *middle* of the time of milking, and again a third time at the *latter end;* the qualities can thus be easily ascertained.

The owners of the dairies which we have described, as well as the proprietors of every other well-managed establishment of the same kind, took particular care of their young stock, and never suffered their growth to be stunted, or their condition injured by want of food or shelter. The young stock were fed with hay in winter, and choice pasture in summer; they were rarely, if ever, supplied with roots of any kind, until they were fit for fattening, which process was not commenced until they were three years old. At this age, a selection was made of the choicest and best adapted for milking or breeding, and these were put to the bull and retained in the dairy or sold off, according to circumstances, and the remaining heifers, together with all the young oxen, were put on a superior pasture, on which they were kept until October or November, at which time they were generally fit to be disposed of to the butcher. If they were not sufficiently fat, or the market was unfavorable, they were put up for stall-feeding, and held over until meat became scarce and dear.

The milch cows were never too highly fed or "*pampered*" during winter; they were kept in good condition, and supplied with pasture and provender, but it would *not pay* to feed them on roots, &c., as this description of food was kept for the fattening stock. Cows which calved in winter were sometimes fed on turnips or mangel-wurzel bran-mashes, &c.

Much difference of opinion exists on the use or disuse of water in the manufacture of butter, and this seems to be one of these disputed points, which, like "thick or thin sowing," and "deep or shallow drainage," seems bound not to be satisfactorily settled. We have seen excellent butter made, in the manufacture of which *thorough and repeated washings were resorted to*, and we have also seen good butter made without the use of water. In both processes, the object of the opera-

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tor seemed to be *to remove every trace of milk*, and to incorporate the salt thoroughly and evenly with the butter.

In the "Transactions" of the Highland Society, of Scotland, an account is given of the experience of Professor Trail in the manufacture of butter, in which he states that the addition of some cold water facilitates the process of churning, especially when the cream is thick, and the weather hot; also, that cream alone is easier churned than cream and milk. That butter produced from sweet cream has the finest flavor, when fresh, and appears to *keep* longest without acquiring rancidity; but the buttermilk so obtained is poor and small in quantity. He also found that scalding the cream, according to the Devonshire method, yields the largest quantity of butter, which, if intended for immediate use, is agreeable to the palate and readily saleable; but, if intended to be salted, is liable to obtain, by keeping, a rancid flavor. The process of scalding is troublesome, and the milk, after the removal of the cream, is poor, and often would be unsaleable from the taste it has acquired in heating. That churning the milk and cream together, after they have become slightly acid, seems to be the most economical on the whole, because it yields a large quantity of excellent butter, and the buttermilk thus obtained is of excellent quality; that the keeping of butter in a sound state, appears principally to depend on its being obtained as free from uncombined albumen, or casein and water, as it can be, *and this perfection is best attained by means of washing and working the butter when taken from the churn.*

Many persons injure the color and flavor of butter considerably, by allowing the cream to stand *too long before churning*, as in such cases it becomes sour and cheesy. The best butter is always obtained where perfect cleanliness is the order of the day, and care and caution are exercised in "skimming," and churning in proper time.

THE MANUFACTURE OF CHEESE.

This branch of rural economy is so closely connected with the subject of this Essay, that it will not be out of place to describe the manner in which the most approved varieties are made.

The Cheshire Cheese is celebrated for its richness and fine flavor. It is made entirely of new milk, the cream not being taken off. Cheshire cheeses are generally of very large size, usually above sixty pounds weight. Each cheese is generally made of the produce of one day's

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milking, from herds of from one to two hundred cows, which feed on some of the best and richest pastures in England. The excellence of this cheese must be attributed to the goodness of the milk, and also to the skill employed in its manufacture; but the color is not entirely natural, as the yellow tint is given by arnatto, marigolds, or carrots. It is said that some of the Cheshire farmers increase the richness and mellowness of their cheese by adding beef suet or any other wholesome and sweet fat, which is poured into and mixed with the curd.

Many persons suppose that all cheese made in Cheshire is of good quality; but such is not the case, as the good brands are confined to a few establishments, and the generality of the article is by no means of superior quality.

Gloucester Cheese is much milder in its taste than Cheshire. Of this cheese there are two kinds, single and double. Single Gloucester is made of skimmed milk, or of milk deprived of half the cream; in consequence of this, it is not very rich, but it is frequently very well flavored. Double Gloucester is a cheese that is a universal favorite. It is made of the *whole milk and cream.* It is a fat cheese, and is usually the kind used for toasting, though the single sometimes toasts very well. Gloucester cheese are generally made of various sizes—the single about eight to the hundred, and very thin; the double, four to the hundred, and at least twice as thick.

The characteristics of Gloucester cheese consist in its richness, the mildness of its flavor, and the smooth, waxy texture which makes it *cut without crumbling*, as Cheshire cheese is apt to do.

Stelton Cheese is a celebrated variety, which from its peculiar richness and flavor, is called the Parmesan of England; its name is derived from its having been first made at *Stelton in Leicestershire*; it is made by adding the cream of *one day, to the entire milk of the next.* The cheeses are of small size, say from six to eight pounds in weight, and of a cylindrical form, made in a vat, and are not considered sufficiently mellow until they are two years old, nor ripe until they exhibit spots of blue, on the interior, denoting the commencement of decay. It is said that some persons keep them in warm, damp cellars to accelerate the process of ripening. The blue part is of a peculiar nature, differing, it is said, from the common blue mould of cheese. The decay should not be advanced beyond *a certain point.* A variety of Stelton, which is

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not so rich as the last, is made in a net, and of the form of a pine cone, the net impressing lines on its surface by the imprint of its meshes.

Sage Cheese, which is also called Green Cheese, was originally made in the vale of Gloucester and Wiltshire, by coloring the curd with bruised sage, marigold leaves and parsley, and mixing this with some uncolored curd, the whole is then made into a cheese, which, of course, exhibits a mottled appearance.

Skimmed Milk Cheese, as its name denotes, is formed of skimmed milk only, and is made in districts where butter is the chief object of the dairyman. What is made in England of this kind has scarcely any flavor, and generally dries as hard as horn, but it is as digestible as other cheese, though not so palatable. On the subject of milk cheese, Dr. Anderson gives his opinion, that it is erroneous that the agreeable taste of cheese depends *solely* on the quantity of oily or fatty matter that it may contain. Parmesan cheese is made of *skimmed milk;* so are the greater part of the Dutch cheese, which are remarkable for being well flavored. He has seen cheese made of skimmed milk which were exactly like the fine cream cheese, and he considers that what is called richness in cheese, depends as much upon *the mode of making it* as upon *the materials with which it is made.* In confirmation of this opinion he states, that though the taste of double Gloucester differs so much from the Cheshire, yet they are both made from the same kind of milk.

Parmesan Cheese, the most celebrated of all kinds, is made in the Dutchy of Parma and Placenza, and in various parts of Lombardy. At present the district of Lodi is in high repute for it. It was formerly supposed to be made from goats milk, but it is made of cows milk, and the rich flavor which it possesses is supposed by some to be occasioned by the luxuriant herbage on the banks of the Po, and by others, solely to the process by which it is manufactured. Half the milk is allowed to stand for sixteen or seventeen hours, and the other half for six. The milk is then coagulated in a cauldron, and, without being taken out of that vessel, the curd is broken very small by an instrument composed of a stick with a number of wires attached. After undergoing this process it is again heated, or rather scalded, till the curd (now a deposit from the whey,) has attained a considerable degree of hardness. It is then taken out, drained, salted and pressed, and in forty days it is fit to

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be placed on the cheese loft. The best Parmesan is that which is three or four years old, and none is carried to market until it is at least six months old.

Cream Cheese, although so called, is not properly cheese, it is merely cream dried sufficiently to be cut with a knife. It is made in this manner: A quantity of cream, (the best and sweetest,) is put in a cheese vat, with green rushes sewed together on purpose, on the bottom of the vat, which must have a sufficient number of holes to allow the whey to drain off freely. On the top of the cheese are also laid rushes, or the tops of Indian corn, in order to allow it to be turned without being handled. It is usual to make these cheeses from an inch to an inch-and-a-half in thickness; the thinner they are the sooner they will be ready. It is kept in a warm place to sweat and ripen, but extremes of heat or cold are injurious, and some judgment must be used in managing it.

The article which is known by the name of "New Cheese," is either made of all cream, or like the Stelton, by adding the cream of one day's milking to the milk that comes immediately from the cow; these cheeses are extremly thin and are compressed gently two or three times, turned for a few days and then sent to be disposed of, to be eaten new with radishes, salad, &c. It may be also made in the following manner: Warm some cream, add runnet in the proportion of a spoonful to a pint, or more if necessary. Put the curd into a seive having a cloth at the bottom; when it has remained twenty-four hours, transfer to a cheese vat, and cover it with a wet cloth and board; in about two hours it may be used.

As the production of butter and cheese of superior quality is a matter of the greatest importance to the farmer, we have not hesitated to introduce the foregoing paragraphs on these subjects.

DISEASES OF CATTLE.

We have not space to enter into this subject fully, and will only make a few remarks on a limited number of the maladies which are most destructive to cattle. Great numbers of cattle die from the effects of diarrhæa and other diseases of the bowels. In many cases these animals might have been restored to health by the timely application of a very cheap and simple remedy. This disease arises from several causes. Sometimes the milk disagrees with the calf, and sometimes it is caused

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by the acidity of the animal's stomach. It is often cured by administering two or three ounces of Epsom salts, with the additions of ten or twelve drops of peppermint. If the purging still continues after this, a lump of chalk, as large as a marble, should be powdered fine, mixed with a teaspoonfull of starch, and given to the calf; and in the generality of cases this will be sufficient te effect a cure; but if it is not, the most effectual mediums are prepared chalk, opium, catechu and ginger, in the proportion of an ounce of the first, one drachm of the second, four drachms of the third, and two of the last mentioned, in each dose.

Diarrhæa, when it is neglected, is apt to degenerate into dysentery, which is a very fatal disease that annually destroys thousands of cattle of all ages. Dysentery sometimes precedes, or accompanies the most fatal diseases, such as murrain and consumption. It is sometimes produced by the sudden disappearance of diseases of the skin, and is also caused by the suspension of some of the ordinary secretions.

When a cow suddenly ceases to yield her usual supply of milk, it has been frequently remarked that she soon is attacked by purging, and on this account it is well *to measure the milk daily*, according to the plan we have described when treating of the management of the dairies.

A great many cows die of *Puerperal, or Milk Fever*, which disease is produced either from their being too fat at the time of calving, from their having been fed on stimulating food, or from the calf having been disturbed in the womb, and thus having its natural position changed, or from the force and violence employed in its delivery. The first symptom of this dangerous disease is a staggering gait; after this the respiration soon becomes affected, the eyes appear prominent and glossy, the animal appears to lose the power of motion in the fore as well as the hind extremities, and sometimes exhibits great pain and distress. Where these symptoms appear, accompanied by coldness and shivering, the loins of the animal should be covered with a sheet or skin, and active treatment immediately commenced. For, in this disease, as well as in many others, delays are dangerous. The animal should be bled; from six to eight quarts should be removed, and probably more, depending upon the size and age of the animal, before the proper effect is produced This disease is generally occasioned by inflammation of the womb; and all inflammatory diseases, on cattle especially, must be subdued by a free use of the lancet. Small bleedings are generally worse than useless.

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After the bleeding, a pound or a pound and a half of Epsom salts should be administered, in conjunction with peppermint water, and half pound doses of the same should be administered every six hours. The bowels must be opened, or the disease will prove fatal.

Inflamation of the Lungs, is a very prevalent disease, which owing to neglect, often proves fatal. This disease is very frequently produced by the cattle being kept *too hot at night and turned out in intense cold in the day time;* also by sudden changes of situations, as from a dry to a damp locality, &c., and sudden changes of atmosphere. The symptoms are quick breathing, which is seen by their flanks, and hanging of the head and ears, hot horns, especially near the roots, loss of appetite and quick pulse, &c. On the appearance of these symptoms, the animal should be at once removed to a place where it can breathe fresh air; copious bleedings is the remedy, that in this case is most to be depended on, and it should be performed as soon as the disease is discovered. If one bleeding does not lower the pulse, the operation must be repeated again and again, until it has the effect required; after this, purgitive medicines should be administered in order to open the bowels. If this treatment is not successful, blisters must be applied to the chest, or counter irritation of some kind produced as near as possible to the seat of the disease. Attention should be paid to the diet of the animal—all stimulating food avoided, and bran mashes, &c., given.

Diseases of the Liver.—The most common found of these are inflammation and enlargement, frequently accompanied by tuberasety. These maladies are of more frequent occurrence in summer than in winter, owing to exposure to intense heat, abundance of young grass, sudden changes in temperature and food, or anything that disturbs the digestive organs. Diseases of the liver are very prevalent among the cattle of the United States—they generally arise from the causes which have been mentioned. In milch cows the usual symptoms of disease of the liver, are: *a diminution of the usual quantity of milk*, which after standing some time presents a ropy appearance, and has rather a saltish taste; as the disease progresses, the countenance becomes dull and heavy, the appetite impaired, the skin tightened and the coat rough and staring. There are several diseases of the liver which begins their attacks slowly and insiduously, and consequently are difficult of detection and cure. Where it is certain that the animal suffers from inflam-

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ation of the part, the proper remedies are bleeding, physic, blisters on the right side, and withholding all stimulating food.

Regularity in food, and equality in temperature, the absence of excitement and fear, shade from the violent heat of summer, and shelter from the colds of winter, are the best preventatives of diseases of the lungs or liver.

RECAPITULATION AND CONCLUSION.

We would in this chapter direct the attention of the reader to the most important points in the foregoing pages, and having done so, in as brief a manner as possible, conclude.

We have endeavored to give a description of the origin of the most approved breeds of cattle, and to show that, whilst some of them—as the Devons, Herefords, &c.—have been preserved from remote antiquity, and handed down from age to age, pure and unmixed, others—such as the Short Horns, Ayrshires, &c.—are the results of judicious selections, careful crossings, and other skillful arts of the breeder.

As the cattle of the United States have in a great measure been derived from Great Britain and Ireland, we have described the favorite breeds of these countries, and given our opinion on their merits.

The rearing of calves is a matter of so much importance that we have devoted a considerable space to this subject, and have given a description of a mixture, or mucilage, which has been found extremely useful as a substitute for milk.

We have described the most approved methods of ascertaining the ages of cattle, and would invite the attention of the reader to that portion of this essay which is devoted to this subject.

The necessity of perfect ventilation, and sufficient light, is well known to every physiologist, but does not seem to be properly understood by many farmers. We have endeavored to direct the attention of cattle breeders to these important particulars, and also to the good results which arise from maintaining a proper degree of warmth in the cattle shed or stable, during winter, as by this means a great saving of provender may be effected.

The management of milch cows, and the manufacture of butter and cheese, are matters of such moment that we have devoted a considerable space to the consideration of these subjects. We have not laid down any rules for the selection of milch cows, as we are fully convinced that

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good milking properties are not confined to any particular breed, size, shape, or color. Among the old unimproved cattle are to be found many excellent milkers. In the Kerry breed we have an instance of small, stunted animals, yielding an abundance of milk. It is well known that some very ill-shaped animals are extremely good for the pail; and also that good milkers are to be found which are perfectly white, as are many of the Durhams; black, among the Dutch cattle; red, in the Belgian breed; brindled, as are the Norman cows; and red and white, as the Ayrshires. In almost every instance, however, the good milker is possessed of a deep and wide frame, and is in full enjoyment of *health and appetite;* the vertebræ of the back stand far apart, verifying the poetic description of the Ayrshire cow:

"Back thin and rugged, quite formed of humps."

We have not entered into a full description of the diseases of cattle, but have only mentioned the symptoms of the most common and dangerous maladies, and the remedies which are most effectual in their cure.

On the subject of fattening cattle, we have not said as much as that important matter demanded, and think it proper to mention in this place that some of the most successful feeders of cattle keep them in boxes of about ten feet square, in which are racks for hay, and mangers for other descriptions of food; that the droppings of the animal are not removed daily from these places, but leveled, and covered over with fresh litter, and this system of management continued until the litter is raised to a certain height by the accumulation of manures. This system of housing may be found to answer better in the climate of Michigan than that now in use. The Huxtable plan, of flooring with lattice, or small boards, set apart so as to allow the liquid, and solid manure, to fall into a cellar, in which dry muck, or ashes, has been placed, has been adopted in some parts of Michigan. We doubt its success in this climate, as the manure will be quickly frozen, and cannot fall through the apertures; and besides this objection, there is another and a weightier one—that the cattle cannot be kept warm enough, on these lattice floors, during the severe winter of the Western States.

We have advocated the feeding of milch cows, in winter, with mangel-wurzel, parsnips, cabbages, carrots, &c., and with bran-mashes, &c., in addition to hay; but we would, if possible, restrict them to the pas-

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ture in summer—this should be of the best quality, and they should have plenty of good water. Turnips are good feeding for cows, but they impart an unpleasant taste to the butter; and on this account it is better management to give them to cattle which are being fattened. In-calf cows should be kept in good condition; but it is not in any way desirable that they should be pampered with much artificial food.

The want of convenient cattle markets, or fairs, as they are called in Europe, is a great drawback on the prosperity of American farmers in general; and in no place is this evil felt more than in Michigan. We may safely say that there is not a county in Great Britain and Ireland in which monthly, quarterly, semi-annual, or annual fairs do not exist; and at these places are collected all the horses, cattle, sheep and hogs which are fit for sale in the locality. In these fairs, the buyer and seller meet on equal terms, for both are well posted in the state of the market, and they make their bargains with their eyes open.

The farmers and graziers make up matched lots of heifers, cows and sheep, for these markets; and the buyer, having a choice to make, and plenty of animals to select from, generally makes purchases that suit him.

The Railroad Companies of Michigan could do a great deal of good by assisting the farmers, drovers and butchers, to establish cattle markets in suitable places along their lines, whilst at the same time they would be increasing their own traffic.

Every settled county in Michigan would be benefited by the establishment of a periodical fair, or cattle market, within its limits, and there are active and intelligent agriculturists to be found in every part of the State, who, if they could be induced to take this matter up would be successful in accomplishing it.

The raising of every kind of produce is encouraged and stimulated by the certainty of a good and convenient market—one that can be reached without trouble or expense; and this fact applies to the raising of horses, cattle, sheep, and swine, as well as to the production of wheat, oats, corn, &c.

When cattle markets are once established in the rural districts, the value of them will become apparent, for the farmer will find out that by means of them he can exchange his stock of every kind for cash, and along with this very desirable privilege, he will have the advantage of competition among the buyers for the animals he has to dispose of.

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According to the present system, the farmer scarcely ever gets the true value of his stock, for the drover or butcher who calls to purchase *has no rival in the market;* he bids whatever he thinks proper, and generally contrives to make a large profit on the transaction.

Michigan has taken the lead of her sister States, in establishing an Agricultural College, an institution likely to produce very important results; let her now establish cattle markets, and her example will be followed by every State in the Union. We need scarcely say, that the State which takes the lead in this important matter will have a decided advantage over those which are later in the field, for the drovers, and breeders, and butchers of the neighboring States will throng into the first markets, and continue to attend them—causing an immense circulation of money.

The farmers have it in their power to create these markets themselves. Let them but appoint a convenient locality—the vicinity of a railroad station is the most suitable place for a market, as the buyers can attend punctually, and remove their purchases without disappointment or delay; let it be published in the newspapers and by handbills, that a market for the sale of all kinds of stock will be held in said place on a certain day; let them encourage their neighbors and friends to take an interest in the matter, and to bring their stock to the market. There need be no fear of a scarcity of buyers; they will be glad to attend wherever good stock are offered for sale.

With these remarks on a matter of very great importance to the farmer, we conclude this Essay, and commit it to the attention of the reader.

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PRIZE ESSAY

ON THE

BREEDING AND MANAGEMENT OF HORSES,

BY EDWARD MASON.

[To which was awarded the Premium of the Society, by the Executive Committee, at its Meeting in January, 1858.]

Naturalits have found considerable difficulty in discovering the native country of the horse.

Herodotus, the most ancient Greek writer, states that herds of wild horses existed in his day, on the banks of the Hypanis, in Scythia, and also in the northern parts of Thrace, beyond the Danube.

Aristotle mentioned the existence of wild horses in his day. He was born three hundred and eighty-four years before Christ.

Strabo, the celebrated Geographer, who was born, Anno Domino 19, states that in his time herds of wild horses were to be found in Spain, and on the Alps.

Although at the present time, great numbers of wild horses are to be found in Tartary, and also in South America, it has been ascertained that in both these places they are the descendants of animals which have escaped from the dominion of man.

The Egyptians are said to have been the first people who made use of the horse for Agricultural and military purposes; yet some historians are of opinion that two thousand years before the birth of Christ horses were unknown in Egypt; and we learn from the Sacred Scriptures, that the ox, the ass, and the camel, were domesticated before the horse; and by the same authority, we are informed that the Deluge "destroyed every living creature that was on the face of the earth, both man, and cattle, and creeping thing, and the fowl of heaven, and they

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were destroyed, and Noah only remained alive, and they that were with him in the ark."

No place could be chosen, from which mankind and the whole animal creation, could be distributed over the face of the earth with greater facility, than from Mount Ararat,—which holds a position almost central among the three great geographical divisions of the Old World. On one side lies the Black Sea, which washes the coast of Asia for more than a thousand miles, communicates with Europe and Africa by the Bosphorus, the Sea of Marmora and the Meditterranean, and receives the waters of four great navigable rivers—the Danube, the Dneister, the Dneiper, and the Don. On another side lie the lofty mountains of Taurus, in which are the sources of the Euphrates and the Tigris, and the rich country between these rivers. Mesapotamia was, in itself, sufficient to sustain great numbers of horses, and it is probable that they remained in this locality until some of them were domesticated.

The great city of Ninevah was founded by Ninus, or as some say, by Ashur, the son of Shem, whom Ninus succeeded. The latter having enlarged and improved the city, called it after himself. It was situated on the banks of the Tigris. Great numbers of horses were kept by Ninus and his celebrated queen, Semiramis.

Nimrod, the son of Cush, whom the Scriptures tell us was "a mighty hunter before the Lord," founded Babel, on the banks of the Euphrates, and this was the germ from which sprung Babylon the Great. It is very probable that Nimrod was the first person who used the horse in the chase of other animals, and this circumstance is probably alluded to by Esop, in his fable of "The Horse and the Stag."

The great Phœnician cities, Tyre and Sidon, began to exhibit signs of growing importance at a very early age of the world's history, and it is supposed that they were the first to export horses from Asia; and when once the good qualities of the animals were discovered, it is probable that their use became general, especially among those nations which were engaged in military or agricultural pursuits.

Egypt is celebrated in Holy Writ for its chariots and its horsemen; a description of force which, at that day, gave its inhabitants a very great superiority over adjacent nations, by furnishing them with an excellent means of invasion and retreat.

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The roving and predatory habits of the Arabs caused the horse to be extremely useful to them, and enabled them to maintain their independence to the present day, in defiance of all efforts to subdue them.

Arabia has produced some of the best horses in the world. The Arabian horses are generally of a dark brown color, but some of them are a beautiful coal black. The thorough-bred Arabian is about fourteen hands high, but in many cases horses may be found which reach the height of fifteen hands.

It is supposed that Arabia derived its horses from Egypt, Barbary, and other parts of Africa, although it lies much nearer to Mesapotamia, the native country of the horse, than any of these places. It is certain that Solomon imported spices, and gold and silver from Arabia, but all the horses which were used in his army, or exported as an article of traffic, were procured from Egypt.

Space does not permit us to give a full description of the numerous breeds which have been, or are celebrated in the world; we are obliged to confine our remarks to a limited number of them.

The Barb, from Barbary, principally from Morocco and Fez, is remarkable for its fine form and graceful action. This horse is superior to the Arab in size and figure, but unequal to that horse in speed and endurance. The best horses of Spain are derived from the Barb, for the Moors, who held possession of Spain for nearly nine hundred years, did not fail to import superior horses from Barbary and other parts of Africa, and being a warlike people, they encouraged the breeding of first rate animals for their cavalry.

As the Spaniards were the first to introduce horses into America, we may be assured that there is a good dash of Arab blood in the horses of the United States.

When Columbus made his second voyage to America, or rather to the West India Islands, he brought over some horses with him; and these were the first importation into the New World. But it does not appear that they were well known on the Continent of America until a considerable time afterwards; for when Cortez landed in Mexico, in 1519, the sight of the horses on which some of his men were mounted so "astonished the natives" that they fled before the invaders in dismay.

It is said that Caleica de Vaca brought horses into Florda in 1527, but they all perished, or were killed.

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De Soto, the enterprising discoverer of the Mississippi, had a considerable number of cavalry in his exploring expedition; and when he found a grave in those waters which he had so earnestly desired to see, his followers returned home by water, and turned their horses loose on the banks of the river. It is said that the wild horses of Texas are the descendants of these animals. It is also stated that the wild horses in various parts of South America can be traced back to those which were turned loose by the Spaniards at Buenos Ayres.

The horses of Spain have long been held in high estimation for military purposes. They were, as we have stated, principally derived from African horses, which had been brought over by the Moors. The Andalusian charger, and the Castilian jennet, were each celebrated in their turn for different purposes.

"Thus have we seen in fair Castile
The youth in flying squadrons start;
Sudden, the fiery Jennet wheel,
And hurl the unexpected dart."

THE ENGLISH HORSE.

When Julius Cæsar invaded Britain, he found the rocks and cliffs covered with armed men to oppose his landing; and he also found a formidable array of war-chariots, drawn by excellent horses. These chariots were managed by the ancient Britons with singular skill and dexterity. We are told by Cæsar, in his "Commentaries," that the warriors ran along the beam, jumped on the ground, and resumed their seats at pleasure—the horses all the while going at full speed, and the chariots reaping a ghastly harvest with the long scythes which were attached to their axletrees.

In these ancient British war-chariots, we have a sample of the reaping machines of that day. The most ardent admirers of England must admit, that the American reapers, of Atkins and McCormick, are a very great improvement on the European original.

Cæsar considered the horses of the ancient Britons so valuable that he brought many of them to Rome, where they became in great request, and from whence they were introduced into almost every part of the Roman empire.

The Romans having established themselves in England, maintained a considerable army in that country; and a great part of their forces was cavalry, drawn from different parts of the world. In this way the

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horses of England became crossed with those of Africa, Asia and Continental Europe.

After the decline of the Roman power, the horses of England were improved and fostered by the Saxon and Danish Kings, and William, the Conquerer, who, it is said, owed much of his success over Harold, at the battle of Hastings, to the superiority of his cavalry, carried the improvement still farther by introducing superior horses from Normandy.

The soldiers of William obtained grants of land in proportion to their services or influence; and spreading themselves into every part of the kingdom, they introduced the manners and customs of Normandy, and brought to their new homes some excellent horses and cattle, and from that time, there appears to have been a steady improvement in the horses of England, which subsequent events tended to increase, or to develop more fully.

The Crusades, which summoned the chivalry of Europe to rescue Jerusalem from the Saracens, seemed to increase the value of horses by creating an extraordinary demand for them; and also afforded the survivors of these perilous expeditions an opportunity to select superior animals from the cavalry of the vanquished enemy, and to introduce them into England, France and Italy, &c.

The heavy defensive armor worn by the knights of the middle ages, rendered strong and powerful horses necessary in order to bear the weight of the "steel-clad men." But the invention of gunpowder, which caused a complete revolution in the art of war, rendered a lighter and swifter horse more valuable, because much of the fortune of war depended on bold and rapid movements.

Henry the Eighth introduced penal and proscriptive laws into England in order to improve the breed of horses, by destroying inferior stallions, and suffering no animals to be kept for breeding purposes which did not come up to a certain standard; but these arbitrary enactments did not survive their originator.

James the Sixth of Scotland, and First of England, was fond of horse racing, and had established sports of that kind when he resided in the former kingdom. On his accession to the throne of England, he established races, and encouraged the breeding of horses by every means in his power.

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Cromwell knew the value of a good horse as well as any other man, be he prince, noble or commoner, for he learned to estimate the importance of rapid movements in his conflicts with the Royal troops. More than once has he decided the issue of a battle by a rapid gallop to the point of danger, where his presence and his dauntless bravery secured a victory. Those celebrated horses the White and Helensey Turks were introduced into England under his auspices.

Charles the Second tried to improve the breed of English horses by importing superior sires from Asia Minor; the animals introduced by him were principally Barbs and Turks.

We have now seen from what a varied stock the English horses has been produced, and can form an estimate of the amount of skill and management, wealth, judgment and perseverance which have been necessary to bring him to his present very high state of perfection.

Among the English horses the Roadster is one of the most valuable and important, and his most essential requirements are, size, action and sureness of foot; all these points have been brought to great perfection by perseverence in skillful and judicious breeding. The English farm horse was, until lately, a heavy, slow animal, the parent of the enormous dray and wagon horses of London, Liverpool, &c., but the English farmer is now beginning to make use of a smaller, and a livelier animal, which experience tells him, can get through much more work in a given time than the heavy horses.

The English Coach Horse is principally derived from the Cleveland Bay Mare, crossed with a thorough bred sire. The produce of the arrangement is an animal possessing a considerable portion of the size and srength of the dam, combined with the spirit and action of the sire. It is to be regretted that these celebrated horses, the Cleveland Bays, are gradually losing their distinctive character, and becoming merged in the general run of English horses. Some of the best draft horses in the United States have been derived from Cleveland Bays and Suffolk Punches, which from time to time have been imported into Vermont, Massachusetts and other Eastern States.

The French Horse.—France possesses several breeds of horses well suited for agricultural or military purposes. The best are in Limousin and Normandy. The latter province has produced excellent horses from time immemorial. The Normands are good agriculturists, and

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they find it to be necessary to keep a large and powerful breed of horses to work their heavy soils. They have for many years supplied the French cavalry with some of their best chargers. The wars of the first Napoleon created a great demand for cavalry horses, and encouraged the agriculturists to raise great numbers of them.

The horses of Canada are mostly descended from those which were imported from France by the early colonists. Many suppose that the Canadian pony is derived from the large Norman horse and that the degeneracy has been occasioned by the coldness of the climate and the want of sufficient shelter and provender,; but such is not the case, for there exists in Normandy at the present day, and also in several other parts of France, a breed of ponies which resemble the Canadian, and are no doubt types of the original from which the latter sprung.

The early French colonists introduced some superior horses into Canada, and also into settlements which now form an important part of the United States.

The Dutch and Belgian horses, are generally large and heavy, and are better suited for agricultural or military purposes than for the race course or the chase.

The draft horses of England and America, have been improved by importations from Holland and Belgium.

The German horses are generally slow paced, but they are strong and vigorous. A superior class of them are to be found in the Austrian and Prussian cavalry. Some of the best horses now used in Germany, have been procured from the Danish Dutches of Holstein, a locality which has long been celebrated for producing excellent horses and cattle.

The American Horse.—Having noticed the horses of England, France, Spain, Holland, Belgium and Germany, we will now consider the horses of America which have been derived from animals imported from each of these countries. We have seen that the English horse has been for several centuries progressing towards the high state of perfection which he has attained; that even in the days of Julius Cœsar, the Ancient Britons possessed excellent horses, which were afterwards improved by the Romans, Saxons, Danes and Normans, until at length England became celebrated for having the best horses in the world. The racer, the hunter, the roadster and the carriage, dray and wagon

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horses of England are unequaled by those of any other European country, and the excellence of several of the American breeds may be attributed to the fact that they are mostly derived from English stock.

The early colonists of this country and their immediate descendants had many trials and difficulties to contend with. They had not the means of procuring first-rate stock of any kind, nor suitable provender to sustain them. It was not until long after the Revolution, that a marked improvement became apparent in the domestic animals of the United States. The laudable exertions of the Royal Agricultural Society of England and the Highland Society of Scotland having produced an important change for the better, in the domestic animals of Great Britain, the farmers and breeders of the United States were resolved not to be excelled by their English and Scotch brethren, and they took means to carry out their intentions by importing the best animals that could be procured, and managed them with skill and judgment.

Messenger, whose progeny have become so widely diffused and so much celebrated in this country, was an English horse, and was foaled in Newmarket in 1780. His color was grey; he was stoutly built, and about 15¾ hands high—got by Mambrine, he by Engineer, he by Sampson. Messenger was imported into New York by Mr. Bergen. He died in 1808. His stock was celebrated as roadsters, rather than racers. They are very numerous and widely spread over all the States.

Hamiltonian, or Hamlintonian, was bred by Mr. Thomas Hamlin, after whom he was named. He was a chestnut, of good form, size, and action. He was foaled in 1800; he was got by Diomede, and was a horse of considerable action, and ran several four mile heats successfully. His stock was very good, but they have been frequently confounded with those of Hamblitonian, a son of imported Messenger.

The Morgans.—As considerable difference of opinion exists respecting the origin of this much celebrated breed of horses, we will make a few extracts from various sources which may serve to set this matter at rest.

The evidence of George Barnard and John Stearns goes to support the opinion that the Justin Morgan was brought from Montreal, in Canada, whilst the following letter from the owner of the horse, after whom he was named, proves, we think, very satisfactorily, that the animal was brought from Massachusetts.

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In the *Albany Cultivator*, for June, 1842, page 99, is the following letter:

"Messrs. GAYLORD & TUCKER:

"Mr. Edward Terry, of Rochester, Vermont, lately sent me two numbers of your "*Cultivator*," containing some account of the origin of the Morgan breed of horses, and also an affidavit of John Stearns, of St. Johnsbury, Vermont, relative to the same subject. I have read the affidavit of the said Stearns attentively, and know that he is entirely mistaken in all his statements relative to the time said horse was taken into Vermont, the *place* from which he was brought, and the *manner* in which his uncle, John Goss, obtained him from my father. For I know very well that said John Goss *never obtained the horse from my father in any way whatever;* as my father owned said horse until the day of his death, and in the settlement of his estate, the horse passed into the hands of William Rice, then living in Woodstock, Vt., but since deceased.

"I will now relate the facts concerning the said Morgan horse, as I recollect them. My father, Justin Morgan, brought said horse, or rather said colt, into Randolph, Vt., in the summer or autumn of 1795. Said colt was only two years old at that time, and had never been handled in any way, not even led by a halter. My father went to Springfield, Mass., the place of his nativity, and the place from which he removed to Randolph, in the spring or summer of 1795, after money that was due him at that place, as he said, and instead of getting money, as he expected, he got two colts, one a two year old gelding, and the other a two year old stud colt; the latter followed him all the way from Springfield to Randolph, having been, as my father said, always kept with and much attached to the colt he led. Said two year old colt was the same which has since been known all over New England as the Morgan horse.

"My father broke said colt himself, and as I have before remarked, owned and kept him to the time of his decease, which took place in 1798. Said horse was five years old the spring my father died; and as before stated, soon after my father's decease, he passed into the possession of William Rice, of Woodstock, Vt. I cannot state *positively* that my father purchased said colt in Springfield, Mass., but I am *very con-*

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fident that he purchased him either in that town or in the immediate vicinity, and I know that my father always called him a Dutch horse.

"JUSTIN MORGAN.

"Stockbridge, Vt., March 1st, 1842."

We give this letter in full, as it is, in our opinion, conclusive as to the origin of the Justin Morgan. The facts stated are confirmed by Mr. John Morgan, of Lima, N. Y., who further stated that the Justin Morgan was sired by a horse owned by Sealy Norton, of East Hartford, Connecticut, called "True Briton," or "The Beautiful Bay." He was kept at Springfield one year by Justin Morgan, and afterwards he was kept by John Morgan. "True Briton" is said to have been sired by the imported horse, "Traveler." The dam of the Justin Morgan was of the Wild-air breed, of medium size, and of a light bay color.

As some description of the Morgan's will be interesting to every farmer, we give the following extracts from various writers:

In the "American Farmers' Encyclopedia," is the following article on this subject: "Perhaps the very best breed of horses in the United States, when general usefulness is taken into consideration, is that which is known in the Northern and Eastern States as 'The Morgan Horse.' This breed is distinguished for its activity, combined with strength. Its size is moderate, and although not possessing the fleetness which recommends it to the sportsman, it has speed enough to entitle it to the appellation of a fast traveler.

"Their usual height is about fourteen hands; color bay; make round and heavy, with lean heads; broad and deep chests; the fore limbs set wide apart; legs lean and sinewey; short strong backs, with that projection of the ribs, from the back bone, which is a sure indication of great development of lungs, and, consequently, of great wind and bottom. For saddle, draft, and other useful purposes, the Morgan horses, bred in Vermont, and in all the Eastern States, including the Northern and Western parts of New York, are so much prized that they command higher prices in all the principal cities of the Atlantic States than horses from other parts of the Union."

The *Maine Farmer* for 1853, has the following remarks on the same subject: "The stock of Morgan horses is so universally known and admired throughout New England, that it is scarcely necessary to repeat their merits. For a seller of horses, it is only necessary for him to es-

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tablish the fact that they are of the Morgan blood, and he meets with a ready sale, at good prices, and the purchasers are more than satisfied.

They excel in great endurance, carrying weight a long distance; and as roadsters, they excel all other horses, in this or any other country. They are full of noble and generous spirit, with such docility that the most timid can drive; but if put to their mettle, they are a full hand for the best driver.

The Cincinnati *Gazette*, of October 13, 1855, gives the following description of the Agricultural Fair at Florence, Kentucky: "Yesterday was the day for the exhibition of horses. In the ring of stallions for harness, four years old and upwards, the blue ribbon (highest premium) was tied on a dapple grey, but just then Champion Black Hawk, belonging to Messrs. P. & L. Melendy, of Hamilton Co., Ohio, was brought into the ring, and the multitude shouted, 'take it off,' 'take it off.'

"It was accordingly taken off, and put upon 'Black Hawk,' and no judgment of the Committee was more heartily approved of by the spectators than this. 'Champion Black Hawk' is of the Morgan stock, and closely resembles 'Old Green Mountain Morgan' in size, build, and carriage. He is a small horse, but his compact build indicates power and endurance, and in horseman phrase, he is 'big for his size.'"

The limits of this Essay do not permit us to give a further description of this interesting breed, which has now become so well established in every part of the Union; but we would direct the readers' attention to an Essay on the Morgan's, written by D. C. Lindsley, Esq., of Middlebury, Vt., which contains many interesting particulars concerning this celebrated breed, and should be found in every farmer's library.

The interest in improving the breeds of all the domestic animals which has been created by Agricultural Societies, by establishing Fairs and Exhibitions, &c., has had its effect on the breeding of horses, and each year brings to the trial field, or the ring, a better class of animals than the preceding one; in fact, a decided improvement is taking place.

Thorough-bred horses are not numerous in the United States, as the sports of the turf are not indulged in to the same extent as in England. The Hunter is a description of horse which is unknown in this country, and the principal study of the American breeder seems to be

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to produce horses which will excel as trotters; and in that pace, the horses of this country cannot be excelled in the world, and are not equalled by the much celebrated "Orloff" trotters of Russia.

It is said that the rage for fast trotters commenced in Boston, about thirty-two years ago. A horse in that city attracted attention by the rapidity of his movements; he was able to trot a mile in three minutes. Since that date, improvement has taken place in the speed of the trotting horse, and some can be found at the present day which can trot a mile in two and a half minutes.

It is a well known fact, that the best horses for action and endurance are those which have a dash of thorough-bred blood in them, and this is easily accounted for, by the certainty that *the thorough-bred is the fleetest and most enduring of all horses*, and the axiom that "like produces like."

The heavy draft horses of Pennsylvania, New York and Ohio, are said to be principally derived from stock imported into this country by the Dutch West India Company; but as a great many years have elapsed since the date of these importations, and fresh arrivals have been taking place almost every year since, it is most likely they are derived from heavy horses imported from England.

"Frank Forrester," in his voluminous work on "The Horses of America," states that there is a very great resemblance between the Irish hunters and the trotting horses of America, and seems to think that the latter are derived from the former; but a little consideration of that subject will be sufficient to show that such is not the case. The Irish hunter is a half-breed animal—sprung from a thorough-bred sire and a roadster or carriage-mare. They are not so symmetrical in form or docile in temper as the American horses, but they show more "*blood*," and are much more spirited.

The same author expresses his surprise at the gentleness and tractability, as well as the sure-footedness of the American horse; but he does not attribute these perfections to their real causes. The American horses are gentle and tractable, because they have been raised by farmers who ministered to their wants with their own hands, and treated them *tenderly* and *kindly*, whilst the horses of Great Britain and Ireland are, for the most part, attended by hirelings, who care "not for the

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beast," but sometimes beat him and abuse him to gratify ill-temper, or teach him vicious tricks for their amusement.

The American horse is generally sure-footed, because his dam and sire were not broken-down on hard roads, as the generality of roadsters are in the "Old Country."

The American farm-roads are all *soft;* indeed, there are very few Macadamized roads in this country—and so much the better for the horse's feet. In the United States, broken-down horses are only to be found in cities and towns, where they have been driven furiously over coarse pavements.

THE HORSES OF MICHIGAN.

In 1701, when the French Governor-General of Canada sent Mons. De la Motte Cadillac, with one hundred men, to form a half-military, half-trading post on the D'Etroit, or strait, which joins the Lakes St. Clair and Erie, that intelligent gentleman, after making the necessary explorations of the locality, selected the spot where Detroit now stands. That the site was well chosen, there cannot be a doubt, and its suitableness for the purpose was pointed out by the fact, that no less than three tribes of Indians had encampments, or villages, in the vicinity. The Hurons and Pottawottamies on the spot where Detroit is at present—the Ottawas on the opposite bank of the river.

As the Post of Detroit was established for the purpose of trading with the Indians, and receiving peltry in exchange for such merchandize as the French could offer to the rude inhabitants, it could not be expected that much progress would be made in Agriculture, or that a valuable class of domestic animals could be introduced. The pioneers of civilization seldom carry *luxuries* into the unexplored wilds of a new country. They are content with a scanty supply of the *necessaries* of life.

The French colonists of Michigan did not depend on agriculture for subsistence. There was abundance of game in the woods, and plenty of fish in the rivers and lakes; whilst clothing, and other necessaries, were supplied from Montreal in exchange for furs. Small patches of land along the banks of the river were cleared and planted with fruit trees, which had been sent out from France, or procured from Quebec or Montreal. As the population increased the clearings were extended, and crops of grain and vegetables were raised; but large horses were

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not necessary, and as they would consume much more food than ponies the latter were used in preference. This state of things continued for a very considerable length of time, for to the credit of the British and their successors, the Americans, be it told, the property and rights of the descendants of the original settlers were respected; and, during all the vicissitudes of conquest and defeat, the lands and tenements in all the French settlements in Michigan, remained in possession of their proper owners. A writer in the *London Times* states that the colonies of France never flourish; they merely struggle for existence for a few centuries and then decline. This opinion is correct in the present instance, for Detroit, or Michigan, never flourished until after emigration had set into it from the Eastern States, Canada and Europe.

Within the last thirty years, a great immigration has taken place into Michigan from New York, Massachusetts, and all the older States, and the new settlers brought with them some excellent horses, which have tended very much to improve the stock of this State.

The first blood horses introduced into Michigan are said to have been "Messengers," but as their pedigrees have not been preserved, this fact cannot be accurately ascertained; at all events, we have neither space nor inclination to introduce pedigrees into this essay, and intend to make but a few cursory remarks on the subject which is before us.

John T. Blois, Esq., in his very useful and interesting work, "*The Gazetteer of the State of Michigan*," published in 1839, makes the following remarks, in describing the domestic animals of the State at at that time:

"The domestic quadrupeds generally partake of the kinds of the adjoining States, but more particularly of Ohio and Upper Canada, from which most of them have been driven, though many have been taken from New York and New England. They are generally of an inferior quality, as is the case in all the Western States. Emigrants have other more urgent cares, to engage their attention, than the rearing of fine horses, or fine oxen. The first object is to erect a cabin, prepare and improve their land for a crop; in short, to *live;* and they procure the first domestic animals coming in their way. *Utility*, and not *beauty*, is the prevalent desideratum here.

Horses are much used, but not as universally as in the States south. The *French*, or *Indian* pony, has long been the favorite ancient domestic with those classes of people, and he is still used to a considerable

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extent in the older parts of the State; mules are still more rare, but are adopted as beasts of burthen by some; oxen are in greater demand for Agricultural labor. Neat cattle and swine are of the same breeds raised in Ohio. But little attention has been given to wool growing, and there are but few sheep in the State. It is thought that this animal will thrive well here, though not equally to what it does in a mountainous region."

"But under all the difficulties of a newly settled State, there is a spirit of enterprise and ambition in our population, that will not brook the present ordinary state of Agricultural improvement, and depreciate breeds of the domestic animals.

During the past year, a State Agricultural Society has been organized, and branches of the parent have been formed in many of the counties. Their attention will be directed to the dissemination of such information as is immediately beneficial to the farmer, and to the introduction and propagation of a superior breed of horses, sheep, swine and neat cattle. This is highly desirable, and must and will be done."

In reading the last paragraph of this quotation, and comparing the state of Agriculture in Michigan *at that day* with *what it is at present*, we are forcibly reminded of the well known adage, and fully convinced of the certainty, that

"Coming events cast their shadows before."

Twenty years have not elapsed since the publication of Mr. Blois' Gazetteer, yet the improvement that has taken place in the domestic animals of Michigan is truly wonderful. The horses, cattle, sheep and swine of this State, at the present day, are highly creditable to the farmers of Michigan—some of them can scarcely be excelled by those of any other State. Twenty years ago, few would imagine that such excellent horses, well-shaped and purely bred Durham and Devon cattle, and superior flocks of Merino sheep, as appear annually at the Michigan State Fair, could be mustered in this State.

Up to 1813, there were scarcely any symptoms of commercial or agricultural improvement in Michigan; but at that date, Gen. Lewis Cass was appointed Governor of that Territory, and under his just administration, affairs began to assume a brighter aspect. The first public land surveys were commenced in 1816 and '17, and in 1818 they were

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brought into market; and from this date, the prosperity of Michigan has been progressing rapidly.

In 1831, General Cass having been appointed Secretary-at-War, Gen. G. B. Porter became Governor of the Territory of Michigan. He was a native of Pennsylvania, and brought with him some excellent thorough bred horses from that State. It is said that these were the first blood horses that were introduced into Michigan.

Lexington and Kippalo, two of Governor Porter's thorough bred stallions, got some good stock in this State. A. Y. Moore, Esq., possessed a horse of Kippalo's stock, and speaks highly of him.

Mr. Moore, has had considerable experience in breeding horses. He approves highly of the progeny of the old American Eclipse, and has had two stallions of that breed himself—one of them "Bucephalus," was a very beautiful animal, attracted great attention at the Michigan State Fair. Mr. Moore speaks favorably of the Bacchus stock, the progeny of the horse "Old Bacchus," of Ohio, and says they are the fastest horses, for short races, that have ever been in this State; he says he owns an excellent stallion of that breed himself. Mr. Moore, in reply to some inquiries of ours, wrote the following letter:

KALAMAZOO, Dec. 28, 1857.

DEAR SIR—Yours of the 23d, directed to me at Schoolcraft, was forwarded to Kalamazoo, where I now reside.

I am glad to learn that you are writing an essay on the "Breeding and Management of Horses." I feel confident you will do the subject ample justice. My letter to Mr. Herbert embodies as much of the history of the horse in this State, as I knew at that time. *That letter was not written for publication in that form*, but hastily thrown together for him to select facts from. Nor was it at all as complete as I could have made it, provided all those I had written to had answered my inquiries. Mr. Eldred and Mr. Wilcox, both of Detroit, could, I think, give you some important information on this subject.

I will give my opinion as to the excellence of the English thoroughbred; him I consider superior to all others, and from him may be derived hores to suit all practical purposes. The racer—the roadster—the draft horse, and the fast trotter, can each be selected from the blood horse; and in breeding one should never be fearful of *too much purity of blood.* These are my ideas, and yet, perhaps, they may be unpopu-

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lar. It is an improvement on any stock of horses, to cross with the thorough-bred; but never advisable to breed *downwards* in blood.

I have had practical experience in using the blood-horse for draft, and farm purposes, and found that he could endure more than any common horse.

I presume you have corresponding ideas; but if not, please give the matter some consideration, for my experience has fully proved it to me.

I am sir, respectfully yours,

A. Y. MOORE.

EDWARD MASON, Esq., Detroit.

The Morgans are highly esteemed by many persons in this State, whilst by others they are considered too small for general purposes. Several horses of this breed were brought into Michigan from Vermont, ten or twelve years ago.

Within the last few years several superior horses of the Black Hawk-Morgan breed have been brought into Michigan, they are owned principally in Branch county; one of them, a first rate horse, named Green Mountain Black Hawk, is, or was owned by Messrs. J. B. Crippen and F. V. Smith. (*See description and pedigree of this horse in the Michigan Farmer for May*, 1856, *by his former owner, David Hill, of Bridgport, Addison Co., Vermont.*)

A. C. Fisk, Esq., of Coldwater, owns some excellent horses of the Black Hawk breed; among these may be mentioned "Vermont Hero" and "Black Prince." It is worthy of notice, that some of the finest horses in Michigan, and the most superior Durham and Devon cattle, are to be found in Branch county.

In 1853, Messrs. Eldred and Backus, of Detroit, purchased "Jackson," from Captain Emman, of Staten Island, N. Y., for $2,000. He was a very fine horse, and his pedigree was excellent. He died in 1855, leaving some fine colts, which we believe are now owned by Mr. Eldred, and promise well.

Messrs. Wales, Wilcox and Campau purchased Abdallah Chief, a Messenger horse, of considerable size, spirit and action; but unfortunately, he met with an accident, and died after having been a year in the State. He has left some young stock of considerable promise.

After the death of Abdallah Chief, Mr. Wales purchased a splendid chesnut horse named "Columbus," for $3,000. This fine animal shared

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the fate of Jackson and Abdallah; he died suddenly, and prematurely. He had not been more than nine months in the State. He left some mares in foal, and his stock may yet make a figure in Michigan. He was of a breed of first rate trotters.

Messrs. Andrews, Eldred and Wilcox, of Detroit, have done considerable towards improving the breed of horses in Michigan, by introducing excellent horses, and breeding from them.

E. M. Crippen, Esq., of Coldwater, has introduced some valuable animals from time to time, of the Messenger, Hambletonian and Black Hawk breeds. He is an excellent judge of horses, and has done much to promote their improvement in this State.

Dr. Jeffries, of Dexter, Washtenaw county, has considerable experience as a breeder of horses. He has some excellent stock, some of which are thorough bred.

We have not space to mention the names of all those persons who breed good and useful horses in this State, but prominent among them are Messrs. Starkweather and H. Welch, Ypsilanti, Washtenaw county; E. Adams, Adrian, Lenawee county; F. V. Smith, Coldwater, Branch county; Justus Gage, Dowagiac, Cass county; W. S. H. Welton, Grand Rapids, Kent county; John Hamilton, Flint, Genesee county; Hon. Kinsley S. Bingham, Kensington, Oakland county; C. W. Green, Farmington, Oakland county, &c.

Thomas Williams, of Dexter, Washtenaw county, has made an important addition to the horses of Michigan by the introduction of Stone Plover, an English thorough-bred stallion of good size, great beauty, and remarkable spirit and action.

Of the comparative merits of the different breeds we do not give an opinion. The Morgans are highly esteemed in every part of the Union yet some consider them too small.

The Messengers cannot be objected to in point of *size*, yet some who are fond of finding fault, make use of the vague expression that they have "too much daylight under them."

In matters such as these, the praise or censure of interested individuals should be equally disregarded by that high court of judicature, a discerning public.

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SELECTION AND MANAGEMENT OF BROOD MARES, &C.

Farmers in general are not careful enough in making a selection of animals for breeding. Many are content to breed from any description of mares that chance may have thrown in the way. This great error must be corrected. A practical man, writing on this subject says: "We breed from fast trotters, hoping to get fast trotters; from fine horses, hoping to get fine horses, and why not remember that if we breed *from bad eyes, diseased feet, spavined hocks, ringbones, &c., why not expect to have these defects handed down to the offspring.*"

The causes of unsoundness in horses are so numerous that we have not space to enumerate them; there are some, however, which prove so destructive to the hopes of the breeder, that we must notice them.

One of the most common imperfections is malformation of the feet, such as the navicular disease, having either too narrow, or too flat a formation of hoof; also running thrush, corns, sand craks, &c.

Unsoundness or malformation of the legs, such as splint, &c., crooked or ill-formed joints, causing bad action or striking together of the legs.

The foolish and dangerous trick of *shying* is generally occasioned by defective vision, and horses which have been kept in dark or badly lighted stables, are most liable to be affected in this way. There are many bad habits which become hereditary, such as crib-biting, jibbing, kicking, &c.; and there are some constitutional diseases to which there is a hereditary tendency, such as favey, glanders, grease, &c. If the breeder cannot reject altogether the offspring of those animals which were thus affected, he should at least endeavor to counteract the predisposition, by crossing with horses or mares of a different temperament.

Breeders of horses should be particularly careful that both sire and dam are as faultless and as perfect in every point as possible. It is a common error to suppose that those animals which have received accidental wounds, or injuries, are not unfit for breeding purposes; in some cases the reverse is the fact, for a blemish, the result of accident, has sometimes been the cause of a hereditary defect or malformation. We were acquainted with a gentleman who owned an excellent roadster mare, and being anxious to breed from her, he put her to a celebrated race horse, the winner of every prize. But he was old and broken down, and on these accounts had been handed over to the breeder, ac-

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cording to the common opinion, that when a horse or mare could do nothing else, either of them is just then good enough to breed from. The mare produced a foal, which at first gave promise of inheriting the spirit and action of the sire, but after some time began to show symptoms of failure in his fore legs, and soon become totally unfit for the road. The dam had a trick of turning suddenly when going at full trot, and the colt inherited this propensity and practiced it to such a degree that it was dangerous to ride him; in fact he combined the imperfections of both parents.

A writer in the "Veterinarian," mentions that he owned a valuable mare which met with an accident, by which one of her foremost legs was broken. The leg was set and the animal recovered the use of the limb, but it was a little bent. He put her to breed, and the foals she produced had each one of the fore legs bent like the dam.

Foals, the progeny of blind horses or mares, have, in some cases, been blind from their birth. These facts will be sufficient to point out to the farmer the necessity of making a careful selection of breeding animals, and to show that they should be free from imperfections of every kind, whether constitutional or accidental.

That "like produces like," was a maxim well known to Robert Bakewell, the celebrated breeder of the Leicester sheep; and every breeder should bear this fact in mind, especially in making a selection of breeding stock. We will admit that it is much easier to *preach than to practice*, and that at times, obstacles almost insurmountable, prevent the farmer from carrying out his views. A settler contending with the hardships of the forest, and not possessing cleared land, or means sufficient to procure or sustain suitable animals, will sometimes be compelled by circumstances, to breed from a mare which he has "used up" on the farm, and which has many faults to transmit to her offspring.

But the wealthy farmer who has plenty of means and abundance of pasture and provender to sustain his stock, has no excuse for breeding from inferior animals of any kind; he can afford to procure desirable brood mares and sires in every way suited to produce good stock and improve the breed of horses, and to remunerate him for his outlay.

It will not be necessary to classify the various breeds of horses, nor to lay down special rules for selecting a superior animal, for the symmetrical form, the animated countenance, and the bold and active step, are

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characteristic of a good horse of any kind; and watchful care and kind treatment, and judicious feeding and training, will constitute *good* management when applied to animals of any kind.

Some persons think they will procure good horses by breeding from tall, long legged mares. This is a great mistake; the mare which is best calculated to rear fine stock is one that is stoutly built, and short legged, with a deep and round chest, strong constitution and powerful vital and nutritive system, indicating great powers of generation and nutrition, in the formation and rearing of the young.

A gentle, well formed mare, with a deep carcass, full chest, and strong constitution capable of sustaining the drain upon it, in rearing a hearty and hungry progeny, is the kind of animal that we would select for breeding.

The age of the mare and horse should be taken into consideration; they should not be too young nor to old; good stock cannot be produced except by animals in the prime of life. *Agricultural Societies should not give premiums for old stallions, nor encourage farmers to breed from them.*

The horse should be compact and symetrical, and *smaller than the mare*, for it has been remarked that when the horse is larger than the mare, the progeny is generally a long legged light-bodied animal.

The swiftest and most enduring horses were remarkable for the shortness of the leg, from the knee to the fetlock joint.

The proper inclination of the shoulders is a matter of great importance, for a horse with *upright shoulders* never possesses action, nor endurance; is fit only for slow draft, and will not produce desirable stock.

Some horses will plow, harrow, or team nearly twice as much as others, merely on account of a superiority of action. In roadsters of every kind, action is indispensible, and it is beginning to be appreciated in the agricultural horse. In drawing home the produce of the farm, as conveying it to market; in plowing, harrowing, or rolling, how pleasant it is to have a team that will walk cheerfully along, and get through the work with spirit and energy.

It is not our intention to enter into a critical analysis of the different points which constitute perfection in the horse; there is scarcely an individual, even of the most limited capacity, but can tell the difference

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between a well shaped, and a mis-shaped animal of any kind. This essay is intended to direct the attention of farmers to the importance of breeding from superior animals, the necessity of taking a particular care of the colts until they arrive at maturity—the judicious management of the full grown horse, the prevention of abuse, overwork and cruel treatment of every kind—the most correct method of ascertaining his age, and most effectual remedies for some of the diseases to which he is liable.

It has been remarked by some writers, that farmers, of all others, are best calculated to raise superior horses, because the farmer's brood mare is not *pampered* too much, as is generally the case in these large breeding establishments where horses and mares are kept merely for the purpose of procreation.

We have in another place noticed the excellence of the horses of Normandy. This superiority over nearly every other Province of France, has been attained by the particular attention of the Normans to Agricultural pursuits, and the necessity for maintaining a powerful breed of horses to work their strong lands. The breeding of superior horses and cattle is an essential branch of Agriculture; and the raising of excellent crops of grain, grasses, and roots goes hand-in-hand with the production of improved breeds of the domestic animals.

When brood mares are kept in luxurious idleness, crammed with food, and overloaded with fat, they become quite debilitated and communicate their languor and weakness to their offspring, whilst on the other hand, when the mare is kept to moderate work, and enlivened by occupation and change of scene, robust and vigorous health is produced and communicated to the progeny. The farmer's mare is generally kept to some kind of light work, until within a few days of foaling, and this practice, instead of being hurtful, is considered to be extremely beneficial, especially when proper care is taken not to distress the animal, or injure her in any way.

The mare should be always well taken care of during the period of gestation; she should be regularly supplied with nutritious food, and good water, and a few days before she is expected to foal, she should be placed in a loose box or shed and well bedded and carefully watched that assistance may be rendered if necessary.

If the weather is mild and pasture sufficiently advanced, she may be

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left in a well fenced and well sheltered paddock, or field, but it is always better that she should have access to some house, or shed, in case of sudden changes in the weather, thunder storms, &c. Should she foal at a season when pastures are bare, and artificial grasses have not appeared, she should be furnished with a plentiful supply of nourishing food, hay and oats, bran-mashes, &c., for where the entire sustenance of the foal depends upon the milk of the dam, it is of the utmost importance to induce a copious supply of it.

The generality of farmers are careful of their mares *after* foaling, yet still there are some who do not seem to understand, that upon the proper care and nourishment of the mare *during gestation*, depend in a great measure the *size and vigor of the foal*, and that neglect and abuse of the mare, during this period, *cannot be repaired* by the most judicious management, *after the birth of a foal.*

A warm bran-mash, or a pailful of gruel, is a very good thing for the mare after foaling, as it stimulates the whole system, and encourages the secretion of milk. Should the weather be mild and grass plenty, she may be turned into a well enclosed field, and left for a month or more to nurture her progeny. After this, she may be put to light work, and if the foal be permitted to accompany her, it will be a great indulgence to both; for when they are separated, it is a cause of great fretfulness and irritation to them, and foals sometimes destroy themselves in their exertions to break out to the dam. The sooner the foal becomes acquainted with man the better; he should be petted and made much of, and never fretted, teased or irritated in any way.

In the United States, sufficient care is not taken of the young colts at that season when the pastures are burnt up by the sun, and water scarce. *It is at this time* that injury is done which cannot be repaired by subsequent good treatment, and this is the principal reason why good breeds degenerate and become stunted and small. It is at *this critical time* that the attention of the breeder should be directed to the importance of procuring suitable nourishment for the mare and her offspring, and his outlay will be well repaid by the improvement that will take place in both.

It is a well known fact that at the particular time we have mentioned, colts are permitted to shift for themselves, and are frequently in want of sufficient pasture and water; and this is the reason why large horses are scarce, and small ones are very plenty.

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MANNER OF ASCERTAINING THE AGE OF THE HORSE.

The teeth of the horse are covered with a hard substance called enamel, which is polished and exceedingly hard. This spreads over the entire front and nerve of the tooth, and passing over the upper edges and surface, is bent inwards and sunk in a hollow in the centre of the tooth. The inside or bottom of this hollow becoming blackened with the food, forms a mark, by the gradual disappearance of which, as the tooth wears down, we are enabled to judge the animal's age, up to the period when this mark becomes entirely obliterated.

At the birth of the foal, the first and second grinders, or back teeth, have appeared, and in the course of a week the two central nippers appear in the centre of the mouth. In the course of a month a third grinder appears in the upper and lower jaw, and at the expiration of six weeks, another nipper grows on each side of the two first. When the foal is two months old, the central nippers will have arrived at their natural level, and at the end of the third month the second pair will have overtaken them; after this the mouth remains unchanged until after the sixth and ninth months, when another nipper grows on each side of the two last. This completes the colt's mouth, and no remarkable change occurs, except in the wear of the teeth, until between the second and third year.

The age of the horse is generally ascertained by the form and condition of the marks in the nippers or incisive teeth.

As we have before stated, the two first teeth generally appear in about a week after the birth of the foal, sometimes sooner, and often not until the expiration of fifteen days. These teeth are rounded in front, and present a surface with the outer edge rising or slanting within the inner. This inequality soon begins to wear down, and the mark which was in the centre of the teeth, and was at first *long* and *narrow*, becomes *shorter* and *fainter*, and at six months old the teeth are worn nearly to a level.

At one and a half years old the mark in the central nippers will be short and slight, whilst in the other teeth it will not present any considerable change.

At two and a half years old the central pair of nippers fall out, and are replaced by two permanent teeth.

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At three and a half years, one on each side of the permanent nippers falls out, and is replaced by a permanent tooth.

At four and a half years, the two exterior teeth of the first set fall out and are permanently replaced.

All the permanent nippers are marked in their crowns with a circular pit or furrow, which is gradually effaced as the tooth wears down. The size and shape of this mark is a correct means of ascertaining the age of the horse, up to the eighth year; but at this age the marks are worn out of all the nippers, with the exception of the two exterior ones—these having appeared a year later than the others, preserve their marks in proportion. Some assert that all the marks are completely worn out *at eight years;* but this is a mistake, and the careful examination of the mouth of an eight-year-old horse will prove the correctness of these remarks.

A horse of three years old will have the central nippers *growing*, the other two pair declining; six grinders in the jaw, the first and fifth grinders level with each other, and the sixth protruding. The sharp edges of the new nippers will be easily distinguished.

At three and a half to four years, the age of the horse can scarcely be mistaken. At that period the central nippers will have nearly obtained their full growth. A space will be left where the second pair stood, or the new ones will have begun to appear above the gum. The corner nippers will have become diminished, and the mark in them will have become small and faint, and at this period, the second pair of grinders will be shed.

At four years, the central nippers will have become fully grown, the sharp edges will be a little worn, the marks will be shorter, wider and more indistinct. The next pair of nippers will be up, but they will be small, and deeply marked. The corner nippers, although reduced in size, will still be larger than the inside ones, and in them the mark will be nearly effaced. The sixth grinder will have attained nearly full size and the tusks will have begun to protrude.

At five years, the mouth of the horse is nearly perfect. The exterior nippers are quite up, and the mark in them is long and irregular. The other nippers are beginning to wear, the tusks are considerably grown, the sixth grinder is up, and the third is wanting.

At six years, the mark in the central nipper is nearly worn out, but

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there is a difference in color in the centre of the tooth and a slight depression in the same place. In the next pair of nippers the mark is short, broad, and indistinct in the corner teeth. The edges are more even, and the surface somewhat worn. The teeth have attained full size, the third grinder is up and the grinders are all level.

At seven, the marks are worn out of the four central teeth, and are also beginning to appear faint in the corner ones, and the tusks are altered in appearance—they have become rounded.

At eight years, the marks are worn from all the nippers of the lower jaw, with the exception of the two exterior ones—in these a very faint mark still remains.

The enamel of the nippers of the upper jaw teeth does not wear off so soon as that of the lawer jaw teeth, as the *former* are not exposed to so much work as the *latter*, consequently the marks do not disappear so soon from the upper as from the lower jaw teeth ; and a good judge may form a correct opinion of a horse's age by observing the marks on the nippers of the upper jaw, after they have become obliterated in those of the lower jaw.

Some veterinarians assert that after eight years, the age of the horse may be known by the shape of the nippers. They say that eight years, the nippers are all *oval*, the length of the oval running across from tooth to tooth; but as the horse increases in age, the teeth diminish in size—become a little separated from each other, and their surface becomes somewhat rounded.

At nine, the central pair of nippers are rounded.

At ten, the others begin to have the oval shortened.

At eleven, the second pair of nipper are quite rounded, and at thirteen, the corner ones are similarly shaped.

At fourteen, the faces of the central nippers become somewhat triangular, at seventeen, they are all so.

At nineteen, the angles begin to wear off, and the central teeth are again *oval*, but in a reversed direction, from outward to inward, and at twenty-one, they are all of this shape.

Although we cannot vouch for the accuracy of the latter part of this system, still we deem it well worthy of attention, and present it to the reader for the purpose of having it tested by observation.

After the marks are entirely worn out of the nippers, the age of the

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horse may be estimated by the state of the tushes, or canine teeth. These are sometimes wanting, especially in the lower jaw, and are rarely to be found in mares. Between the tushes and the grinders there is a large open space—in old horses this space appears wider than in young ones—and the flesh recedes from the roots of the teeth, according as the animal advances in age.

The grinders are six in each side of the jaws. They are sometimes called molars, from the Latin word *mola*, a mill. Their crowns are quare and crossed with lamina of enamel. The freshness of this enamel indicates the youth of the horse, and when it appears dark and discolored, it is a good sign that the animal is old.

The canine teeth or tushes of the lower jaw appear at three and a half years, those of the upper jaw at four years. Until six, they are sharp pointed, and at ten, quite blunt and long; at that age the gums begin to recede from the teeth.

When the marks are worn away from all the nippers, the horse's age cannot be known with certainty. Yet a good judge may form a tolerably correct opinion by the size, bluntness and discoloration of the tushes.

The eye-pits of horses of from ten to fourteen years of age, become gradually more hollow, and their eyebrows grayer, from year to year, and the bars or ridges of the palate become effaced, in proportion as the horse advances in age.

The age of the horse is always calculated from the *first of May*. Early foals acquire their teeth, and lose their marks, in proportion to their age.

These observations refer to the teeth of horses which have been fed in the ordinary way; if the foal has been deprived of the milk of its dam too soon, and fed on oats, corn, or other hard food, the teeth will grow in proportion to the work they will have to perform; they will acquire their marks in advance of the natural period, and their decay will commence earlier in proportion.

The teeth of the horse are frequently damaged by hard substances in his food—such as bones, bits of wood, iron, stones, &c. Too much care cannot be taken to have his provender free from everything of this kind, for it is on the proper mastication of the food that the health and vigor of the animal depend.

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The enamel sometimes wears off the teeth of old animals, and thus become fagged and rough, and wound the sides of the cheek in such a manner that it is necessary to file off their sharp edges.

The grinders sometimes grow unevenly, from their not being exactly opposite to each other. Sometimes a tooth grows so long that it penetrates the bars above, and causes great irritation and annoyance to the animal. The mouth should be examined occasionally, and if a tooth of this kind appears, it should be filed down to a level with the rest.

FOOD OF THE HORSE.

After describing the *teeth* of the horse, it will not be out of place to make a few remarks on *his food.*

Before the introduction of machines for chopping up hay, straw, corn-stalks, bean and pea haulm, &c., a great deal of these kinds of provender was wasted by being pulled out of the racks and trampled in the litter; but by the use of these machines, (the English call them chaff-cutters,) much food has been economized; and it being presented in an agreeable form, and mastication being by this means rendered easy, the health and good condition of the horse have been much improved wherever they are used.

By means of the chaff-cutter, wheat, oat, or barley straw, clover, or meadow hay, in fact every description of forage, may be cut up and mixed together, according to circumstances, and a great saving of hay effected. Some persons mix oats with this chaff, or chopped fodder, but we do not approve of this plan, as the horse is apt to throw the chaff out of his manger whilst searching for the oats. This practice may be prevented in a certain degree by placing iron bars across the manger.

Horses soon become fond of chopped food; and the majority of them when once accustomed to it, will not like to make use of any other kind.

Oats are the best food for horses; and for this purpose, they are used in almost every part of the world, in connection with hay, or straw. Oats are very nutritious—they contain seven hundred and forty-three parts out of one thousand of nutritive matter. Oats for feeding should be *old and heavy.* New oats will weigh more than old, but the excess consists for the most part of water. New oats are not so easily masticated as the old, as they are generally soft, and form sticky pulp under

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the horse's teeth. Some farmers chop up unthreshed oats, and give it to their horses. We have found them to thrive well on this kind of food.

White water, which is made by mixing oatmeal with lukewarm water, is a very nourishing drink for a horse; it is extremely refreshing after a journey, or severe work of any kind. It should be made use of occasionally by every owner of horses. When oatmeal cannot be procured, cornmeal is a good substitute.

In some places, barley is much used as food for horses, but in general it is not much esteemed for this purpose. Boiled barley has been sometimes given to weak horses with a good effect, but it is not strengthening food for a working horse. The best way in which it can be given is in the form of mashes; but these are not always suitable, as they are apt to cause relaxation of the bowels.

Wheat is rarely given to horses; but in some cases, when a farmer has a large quantity of damaged grain of this kind, and cannot get it off his hands in any other way, he gives it to his horses; and at times, when they have become gradually accustomed to this kind of food, they thrive well on it. It should always be bruised, and given in chopped hay, or straw, as it contains a considerable portion of gluten, or sticky, adhesive matter, which makes it difficult of digestion, and apt to form obstructions in the bowels, unless mixed with more digestible food.

It is said that horses fed on wheat should not be permitted to drink much water, especially immediately after feeding, as the water is apt to carry away all the starch into the cœcum, or water-stomach, and leave an almost indigestible mass behind, which sometimes causes serious injury to the animal. When wheat is used, it should be in connection with a large share of hay; some say that straw is *better* in such cases.

The horse-bean does not thrive well in this country, and on this account beans are not much used as food for horses in the United States. The varieties which do succeed well here command a high price as human food, and on this account it would not be good management to consume them as food for the domestic animals. Although beans are nutritious and strengthening in a very great degree, they do not contain as much nutritive matter in their composition as oats. They are very much used in England, and the horses of that country have become so accustomed to them that they can scarcely stand a hard day's work

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without a supply of them. The proportion of nutritive matter in beans is only five hundred and seventy parts in one thousand. They are sometimes given whole, but this practice is bad, as they are difficult of mastication, and should be bruised, or ground before they are given to the horse. The bean is an astringent, and at the same time a stimulating food, and should always be given in connection with some other description of provender which would have a tendency to a healthy action of the bowels.

Peas are sometimes used as food for horses, but their use is by no means general, and they are not considered a desirable kind of provender.

In one thousand parts they contain five hundred and seventy-four of nutritive matter. They should be bruised and ground before they are used, as from their shape they slip away from under the teeth of the horse, and are not easily masticated.

Some horses have died soon after eating a hearty meal of peas. In such cases the stomach has been burst by the swelling of the peas. This fact will be sufficient to point out the necessity of caution in the use of this, or any other kind of food, likely to have a similar effect.

Ruta bagas, or Swedish turnips, are, in some places, at certain seasons, very much used as food for the Agricultural horse; and when properly managed, and used in moderation, they are considered wholesome and nutritious. In order to make them truly valuable, they should be boiled or steamed with chaff, or chopped hay, or straw. We have frequently used them as food for horses, and have found them to answer well in some cases, but they have a tendency to relax the bowels, and make the horses soft, and unable to stand hard work. That they are wholesome and nutritious there cannot be a doubt, but considerable caution is necessary in giving them to horses, and they should be always used in connection with stronger food.

Carrots are highly esteemed for horses, yet they are best managed when given in moderation, and in connection with other food. Carrots are wholesome, and very nutritious, but too much of them are bad for the horse—they cause inflammation of the eyes, and a sluggishness of spirit. A moderate quantity will have an excellent effect on the system—they will promote digestion, impart a fine gloss to the coat, and in every way tend to improve the animal's condition. Some persons feed

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on carrots exclusively at certain seasons, and consider them desirable food for the horse. We have had some experience in the matter, and have given our opinion.

We have known five or six carrots to be given daily, with the usual supply of other food, and have noticed their good effects when managed in this way.

There cannot be a doubt but carrots are a most excellent vegetable, and should be raised by every farmer.

Potatoes when boiled and mixed with bran, are an excellent food for the farm horse. We have frequently made use of them with good effect, but they should not be given to horses which have to move rapidly, or perform any kind of violent labor, or exercise. They answer very well for horses which are kept at the plow, or some other slow work. We have found that horses which have been fed on potatoes and bran in winter and spring, do not thrive so well on the summer pasture as those which have been hard-fed.

Farmers who make use of potatoes or ruta-bagas as food for horses, should have a steaming apparatus for the purpose of cooking them.

Clover is so much used that its merits are generally well understood. When used green, it is the better plan to cut it and feed it to the horses *in the stable*. Much saving can be effected in this way, as when animals are allowed to run loose in the field, they trample down and destroy nearly as much as they eat. In the stable the horse will be shaded from the heat, and protected from swarms of flies which assail him in the field; and besides these important considerations, *a large quantity of excellent manure will be made, to be returned to the soil with great benefit.*

Clover hay generally receives too much sun in the saving, and it very frequently is allowed to become too ripe before it is cut. From both these causes, it is frequently so dry that the leaves fall away in dust, and the stems become so hard and sapless that they are good for nothing. When it has been cut down in time, and properly managed in the harvesting, its leaves and stems are preserved, and its nutritive properties are uninjured.

The following is a list of the quantity of nutritive matter contained in some of the most generally used forage plants:

One thousand parts of Timothy grass contain, at the time of seeding, ninety-eight parts of nutritive matter;

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Ruta-bagas contain sixty-four parts in one thousand;
Cabbage, seventy-three;
White turnips, forty-two;
Vernal grass, seventy-seven;
Cocksfoot, fifty-nine;
Meadow fescue, ninety-three.

We have given the proportion of nutritive parts in Oats, Beans and Peas in another place.

Water.—It has been frequently remarked that a horse never drinks *hard* water when he can get *soft;* and it is also considered that *hard water* has an injurious effect on the horse, by causing his coat to stare, and his whole system to be affected in a certain degree. It not unfrequently occasions inflammation of the bowels and lungs. Horse-trainers are very particular about the description of water which is given to horses under their care. Sometimes loss of life, and sometimes the loss of a race is occasioned by the water which the animal has used.

The sickness of Col. Ten Brock's racing stud, whilst in England, and the death of some of them, is said to have been caused by the hardness of the water, and the humidity of the climate of that country; whilst the success of Prioress over an immense field of English first-rate racers, shows plainly that the horses of the United States are able to contend successfully with the best in the world.

A plentiful supply of water should always be provided for the horse in every *stage* of his life. Without this necessary he will not thrive. Rain water is always soft; so also is the water of brooks, creeks and rivulets. Some horses drink the coldest water without the slightest injury; but this should not cause us to be careless in this matter. We should always recollect that the health and condition of the horse are sustained and improved by good and wholesome water.

DISEASES OF THE HORSE.

There is scarcely any animal subject to more diseases than the horse; but a great many of them are caused by abuse, neglect or mismanagement. Some of these can be prevented by proper care and caution, and others considerable alleviated by skillful treatment. Some simple diseases, which might have been easily removed by a timely application, become inveterate and incurable when permitted to take their course. We have not space to describe all the diseases of the horse,—we can

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only mention a few of them, and endeavor to point out the best means of prevention or cure.

Distemper, which is a well known and very common disease, generally commences in a shivering fit, to which succeeds great heat of mouth and nostrils, together with redness of the eyes and the membrane of the nose. This disease sometimes becomes fatal, when not attended to promptly. Its treatment requires judgment and skill. If discovered in its earliest stage, bleeding is indispensable; but if allowed to run some days until the animal is weakened by loss of appetite, &c., bleeding would be dangerous; but the bowels should be opened by mild purgatives, blisters should be applied to the throat, whilst the strength of the animal should be sustained by mild food, such as bran-mashes, gruel, &c. This disease being contagious, the sick horse should be at once removed from the rest, and attended carefully and promptly. Timely attention to the first symptoms of this disease, and the separation of the sick horse or colt from the healthy ones, will prevent the spread of the distemper, whilst judicious treatment will cure it and prevent it from degenerating into an incurable disease; for, when neglected, it not unfrequently terminates in inflammation of the lungs, or putrid fever, or degenerates into *malignant* epidemic—a disease which very often proves fatal. The unmistakable evidences of this malady are, loss of appetite, foul breath, fœted discharge from the nostrils, and a peculiarly offensive smell from all the evacuations.

In bad cases of this disease, the pulse becomes small, and the animal refuses to feed, inflammation sets in, gangrene follows, and the animal dies.

The treatment of malignant epidemics should be regulated by the peculiar nature of the case. If the distemper to which it usually succeeds has been severe, bleeding may perhaps stay the disease ; but if the horse has become much debilitated, we have stated in another place, that bleeding may be fatal. Mild purgations should be given, to be succeeded by mild astringents. Chalk and ginger are simple remedies ; the former is commonly given in conjunction with catechee, or Japan earth, and is very effectual in neutralizing acidity of the stomach and bowels. Ginger is valuable as a cordial and a restorative of the appetite.

We cannot enlarge on this disease or its remedies ; but we would

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call attention to the fact that it seldom makes its appearance except as a consequence of carelessness and neglect.

Thick Wind is another disease, which, if not attended to in time, and alleviated by skillful treatment, is apt to degenerate into an incurable disorder.

It may be known by short, quick and laborious breathings, which succeed each other very rapidly. A horse afflicted with any disease of the chest is thick winded, because the act of breathing causes pain, which prevents him from respiring freely. A horse unused to violent exercise is thick winded, because the lungs cannot easily accommodate themselves to the increased action.

This disease, if it can be so called, is caused by obstructions in the air vessels of the lungs, and is sometimes occasioned by overloading the stomach with dry, innutritious food. Clover, which has been too long exposed to the sun and has become dry and *dusty*, mildewed straw and worthless hay have each in their turn performed their parts in producing this affection, which, when unattended to in time, is almost certain to degenerate into

Broken Wind.—This disease can easily be distinguished from the last from the fact that in thick wind the breathing, though labored, is performed evenly, that is, the inspiration and expiration occupy the same length of time. In broken wind this is not the case; for the inspiration is performed by one effort, whilst the expiration is performed by two. The cause of this difference is easily explained. Thick wind is caused by the oppression or obstruction of the lungs, whilst broken wind arises from the rupture of the air cells, which causes several of the minute vessels to run into each other, and in this manner to form jagged, irregular cavities, into which each inspiration draws the air freely enough, but to expel it perfectly *two efforts are required.*

Broken wind is always accompanied with a peculiar kind of cough, which is an almost unmistakable symptom of the disease.

Every disease or derangement of the functions of the lungs has a tendency to cause broken wind; so has also the use of any provender which occupies much space; for if the horse be subjected to hard labor whilst the stomach is distended with such food, the lungs being compressed into too small a space are liable to have the air cells burst, by the efforts of the animal to breathe.

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Racers and roadsters do not generally become broken winded, because their stomachs are seldom distended with such worthless food as we have named; they are generally hard-fed. The farmer's horse is most liable to this disease, because he is, for the most part, fed on bulky food, which is supplied to him without stint, and sometimes after he has filled his stomach to repletion, he is taken out and put to hard work, or perhaps treated to a gallop by some thoughtless boy.

This disease being incurable, the necessity for taking precautions to prevent it must be apparent. The farmer should feed his horses on condensed food. He should use less hay or straw, and more oats, corn or beans. The periods of fasting should be shortened, in order that the horse may not feed with a ravenous appetite, or fill his stomach with too much food of any kind. Carrots have been found beneficial in the treatment of this disease; in fact, they are good for all diseases of the chest, and being an excellent vegetable, should be cultivated by every farmer.

The bowels of the broken winded horse should be kept free by the use of mashes, &c.; water should be allowed sparingly during the day, but when his labor is over, the animal should be permitted to slake his thirst freely—exercise should not be taken after meals or water.

One of the most dangerous diseases to which the strong and healthy horse is liable, is spasmodic colics. It is sometimes mistaken for inflammation of the bowels, but a little observation will enable the farmer to know one disease from the other. In colic, the legs and ears are of a natural heat; in inflammation of the bowels, they are cold. In colic, relief is obtained by rubbing the belly; whilst in inflammation of the bowels, the belly is tender and painful to the touch. In colic, relief is obtained from motion, and there are intervals of ease, and the strength of the horse does not appear to be much affected; whilst in inflammation of the bowels, the symptoms are quite the reverse.

Colic generally attacks the horse suddenly, and with very little warning of its approach. It is very often occasioned by drinking cold water after hard or violent exercise of any kind, by a sudden exposure to cold, green food given when the horse is heated, and various other causes. Some horses are much more predisposed to this disease than others.

The farmer should always be provided with medicine to use in cases

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of emergency. Spirits of turpentine is one of the most certain remedies for colic, especially when given in connection with opium. Three ounces of spirits of turpentine with an ounce of laudanum, administered in a pint of ale, will sometimes remove the pain effectually, but if it continue, bleeding must be resorted to, in order to prevent inflammation.

Inflammation of the bowels is sometimes mistaken for spasmodic colic, and *vice versa;* yet they are quite distinct, for the former disease begins gradually with some indications of fever, whilst the latter begins suddenly, and the pulse is very little affected especially in the commencement of the attack. Inflammation of the bowels is generally occasioned by sudden exposure to cold; sometimes by the transition from a warm, overheated stable, to a cold atmosphere—often by a sudden drenching rain, drinking cold water when heated by violent exercise, &c. In all cases the treatment should be prompt and active; six or eight quarts of blood should be taken, or more if the pain do not subside. In this case the weakness of the animal should not prevent the operation of bleeding. Clysters, composed of warm water and gruel, in which half a pound of Epsom Salts has been dissolved, should be administered, for it is necessary that the bowels should be moved, and purgatives may have too violent an effect. Counter irritation should be produced on the exterior of the body, as near as possible to the seat of the disease. The whole of the belly, or a great part of it, should be blistered, and the legs bandaged in order to encourage the circulation, and the animal should be sheeted and kept from exposure to cold.

There is scarcely a farmer but has lost a horse or horses by some of the diseases which we have now described. The importance of being able to detect the disease and to provide a remedy is evident. In some cases every man must be his own farrier, and in many instances a timely application will arrest the disease and render expensive medicine unnecessary.

THE FEET AND LEGS.

In his wild state, the horse is not subject to these numerous diseases of the feet and legs which the neglect, abuse and mismanagement of man have originated and fastened upon him; and the truth of this asser-

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tion will be apparent, when we consider the evil consequences of abuse or overwork, in maiming, disfiguring or producing disease.

It has been well said by Mr. McCulloch, that the foot of the horse is one of the most wonderful pieces of mechanism in the world; for in it, complexity of parts and regularity are united with simplicity of design. The hoof contains a series of vertical and thin lamina of horn, so numerous as to amount to about 500, and forming a complete lining to it. Into this are fitted as many lamina belonging to the coffin-bone, whilst both sets are elastic and adherent to each other. The edge of a quire of paper inserted, leaf by leaf, into another, will give an idea of the arrangement. Thus the weight of the animal is supported by as many elastic springs as there are lamina in all the feet, amounting to about 4,000, distributed in the most secure manner, since every spring is acted on in oblique direction. Such is the contrivance for the safety of an animal destined to carry greater weights than his own body, and to carry them under the hazard of heavy shocks.

The structure of the horse's foot is a striking example of the wisdom of the Creator. It is evident that the animal was destined to become the servant of man, but it was never intended that he should be abused by overwork, cruel treatment, or culpable management.

In riding over a stony field, we may observe that the horse picks his steps carefully, and avoids every stone. He evidently knows that, although his feet are hard and strong, they are liable to be injured by coming in contact with a harder substance, and instinct teaches him to avoid the injury. But man forces him to violate the precautions of instinct, and the results are apparent in the numerous diseases of the feet and legs, which generally terminate in the lameness or breaking down of the animal.

Suppose that unthinking individual who drives the horse furiously over a coarse pavement, were to feel a specimen of the pain he inflicts, he might perhaps in future be more inclined to have "mercy on his beast." Let him put on a pair of tight *iron* shoes, and run at full speed over a rough pavement, and if he do not experience acute pain in that particular spot where "the shoe pinches," we have been deceived.

Many horses which, with care and kind treatment, might have lasted several years, and performed valuable services, are broken down prematurely by violent exercise and reckless driving.

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The hoof of the horse is composed of the crust, the bars, the sole, and the horny frog. The crust, or wall, reaches from the hair to the shoe; it is deepest at the toe, shallowest at the sides, and is of least extent behind what is called the heel. In front, the crust is about half an inch in thickness, and it becomes gradually thin as it approaches the heel. It is, therefore, not to be wondered at, that horses are sometimes lamed in the shoeing. The crust is thinner on the inner than on the outer quarter, because the inner quarter is more under the horse, and consequently more weight is thrown upon it—in fact, it is directly under the inner splint bone, upon which a considerable portion of the body rests, and being thin and elastic, is able to expand, and by this means concussion and injury are, to a certain extent, avoided. But when expansion of the quarters is prevented by heavy and tight shoeing, *the inner quarter always suffers more than the outer one;* and on this account corns are generally found in the inner quarter. Contraction commences there, and it is the seat of sand-cracks.

On account of its thinness, the inner heel wears away sooner than the outer one; and this fact should always be borne in mind by the smith, whose object is to give a plain and level bearing to the whole of the crust. It will in most cases be unnecessary to remove much from the inner heel, for it has already been worn away by the wear of the foot; and if the smith pares away much in this place, he will make the inner quarter *lower* than the outer, and by thus throwing an uneven bearing upon it, he produces sand-cracks.

Some horses are subject to brittle hoofs, especially during summer; and in some cases the hoof becomes so much frittered away that there is scarcely a hold left for the nails. A mixture composed of one part of the oil of tar and two of fish oil, well rubbed into the crust, will restore the pliancy and toughness of the horn, and encourage its growth.

The inside of the crust is covered with numerous thin leaves of horn, which reach from the coronary ring to the toe. They number about five hundred, and closely resemble the inner surface of a mushroom. They correspond with similar cartilaginous and fleshy leaves on the surface of the coffin bone, called, from their construction and functions, "sensible lamina;" and the one series being received within the other, they form together a most elastic body, by which the whole weight of the horse is sustained.

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These sensitive or sensible lamina, or "lamella," (little leaves that have feeling,) are replete with blood vessels, and are liable to inflammation when they become *violently heated, bruised, or strained by violent exercise or overwork;* and it is not to be wondered at, if, after a rapid race over a hard course, or a furious drive on a stone pavement, these delicate plates should become inflamed. The wonder should be, that they are able to endure half the concussion to which they are subjected.

We have mentioned, in another place, that the inner quarters of the hoof are the seat of corns. These are almost always found between the bars and that part of the crust which bounds the inner quarter. In this locality the horn of the sole has sometimes a red appearance, and is softer than in any other place. The horse flinches when this part of the sole is pressed, and sometimes lameness is occasioned by the disease. The cause is pressure on this particular part, by which means blood is extravasated, or driven out of the proper vessels, and becomes inclosed in the horn, which on this account becomes spongy and diseased.

The unshod colt, or horse, seldom has corns; they therefore may be considered as the consequence of shoeing, especially when this operation is performed in a careless, or injudicious manner; for when the shoe is badly formed, or kept on too long, the expansibility of the foot is destroyed, and on this account particular care should be exercised in shoeing, and the shoes should not be allowed to remain on *too long*—a frequent removal being necessary.

Thrush is generally found in the hind feet; and this is accounted for by the fact that they are exposed to the evil consequences of standing in the dung and moisture of the stall. The horses of the United States are not very subject to this disease, because they generally stand on boards, and are, for the most part, kept dry and clean. In Sweden the horses, although small, are remarkable for the soundness of their feet; and this is no doubt attributable to the Swedish system of stable management, in which no litter is used. The stalls are floored with plank pierced with holes to allow the liquid to escape. By this means the feet of the horse are kept perfectly dry and clean. Thrush *is inflammation of the lower surface of the frog*, from which cause matter is secreted, which causes the softening and disease of the surrounding parts.

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A little attention to cleanliness, and frequent washings of the feet, will prevent this disease. A neglected thrush sometimes becomes incurable, for it is liable to spread over the entire sole, from which the horn disappears, and hardened mucus takes its place; this falls away gradually, and exposes the sensible frog, which is so tender that the horse cannot bear the slightest pressure on it, and lameness is the consequence.

The most effectual remedy for thrush is a paste composed of two ounces of blue and one of white vitriol, powdered finely and rubbed down with one pound of tar and two of lard. Before this paste is applied, the frog should be cleaned out perfectly, and every portion of diseased horn removed. A piece of tow, with the paste spread on it should be inserted in the cleft of the frog every night, when the horse is quiet in the stable, and removed every morning when he goes to work.

When thrush is neglected it is very apt to degenerate into canker, which is a separation of the horn from the sensitive parts of the hoof. Canker is a serious disease, the cure of which requires the utmost skill of the veterinary surgeon, into whose hands we resign it, as we have not space to enlarge upon the various remedies which are prescribed for it.

Splint is a disease which is always found on the *outside* of the small bone on the *inside* of the leg. The reason of this is, because the inner splint bone is placed nearer the centre of the body than the other, and consequently sustains more of the weight, and is more liable to injury on this account. Splints generally yield to the application of strong mercurial ointment, or blistering of the part affected; but in many cases it is much better not to meddle with them.

The Back Sinews are inclosed in a sheath which confines them to their proper place, and protects them from injury. Between the sinews and the sheath there is an oily fluid which lubricates the parts and prevents friction; but when the horse has been abused by violent exercise or overwork, the sinew presses on the delicate membrane which lines the sheath, inflammation arises, and a different description of fluid is thrown out, which coagulates and forms an adhesion between the sinews and the sheath, and consequently the motion of the limb become *stiff* and *painful*. At other times, from violent exertion or overwork, some of the fibres which tie the tendons become ruptured. A slight injury

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of this kind is called "*Sprain of the back sinews;*" but when the injury is great, the horse is said to have "*broken down.*" In cases of the latter description, the inflammation is sometimes very great, and the pain excessive, occasioning great lameness, &c. Under such circumstances, bleeding at the toe will sometimes give relief; but medicine should be administered, lest the inflammation spread through the entire system. The legs should be fomented with warm water several times a day, for at least half an hour at a time, and between each fomentation they should be poulticed with linseed meal.

The beneficial effects of these applications depend on the warmth of the water and the moisture of the poultice,—the principal object being to abate the inflammation. Every severe or stimulating remedy should be avoided.

When the pain and inflammation have subsided, and the horse is beginning to put his feet better to the ground, the legs should be well bandaged with flannel, moistened with vinegar, to each pint of which a quarter of a pint of spirit of wine should be added. By this means, the skin will be slightly stimulated and contracted, and the constant evaporation will remove whatever inflammation remains.

Farmers should be careful not to breed from horses or mares which have been broken down, as their progeny will certainly have a predisposition to fail in the same manner.

Windgalls are generally confined to the hind legs, and are found near the fetlock joints. We have mentioned in another place that wherever the tendons are exposed to friction, little bags, containing an oily fluid, are placed for the purpose of lubricating them. When the tendons become strained or overworked, these little bags become injured, inflammation sets in, and they become large and hard. These puffs or enlargements are generally found about the joints, for in these places there is most motion and pressure. When they first appear, they sometimes are accompanied with lameness; but in most cases they do not interfere with the motions of the horse. Bandaging is the best and surest remedy for windgalls. Soft pads should be placed on each of the tumors, and they should be bound tight with flannel bandages, moistened with the mixture prescribed for spain of the back sinews.

The symptoms of *Sprain of the Coffin joint*, are sudden lameness, and heat and tenderness in the locality of the joint. Although this

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sprain is attended with lameness, it does not present any swelling, and can only be detected by a soreness around the seat of the disease. Bleeding at the toe, and warm fomentations, have been found beneficial in this case. It is a common error to suppose that the seat of this disease is in the shoulder; and the lameness sometimes becomes *permanent*, when its true situation cannot be discovered. In some cases, it degenerates into *Ringbone;* which disease generally commences about the pastern joint, and spreads rapidly, until it not only embraces the pastern bones, but also the cartilages of the foot. In its early stages the lameness is not very considerable, and may be removed by blistering, or the application of the cautery; but when the disease has spread so far as to embrace the cartilages of the foot, it becomes confirmed. It is seldom cured, except when taken in its earliest stage, and even then it has sometimes baffled the skill of the veterinarian. In the treatment of it, *blistering* may be serviceable, but *firing* is the surest remedy, and this operation should always be performed with caution, lest the skin be perforated by the iron.

Curb.—In the neighborhood of joints there are ring-like ligaments, for the purpose of tying down the tendons. From overwork, violent exercise, or a wrench of some kind, these ligaments may be strained; in which case, inflammation and swelling ensue. Curb arises from these causes. It is an enlargement at the back of the hock, at about three or four inches below the joint. At their first appearance, curbs are generally accompanied with considerable lameness, but the swelling is so slight that it can scarcely be perceived except by observing the leg sideways. In the treatment of this disease, the first object should be to abate the inflammation, and this is best effected by applying evaporating lotions to the part. Equal portions of spirits of wine, water and vinegar will form an excellent wash for this purpose.

If the heat and lameness are considerable, physicing, and bleeding at the seat of the disease, must be resorted to. In some cases, bleeding will be found the best means of allaying the inflammation, and firing must be resorted to *only when every other application fails.* In the treatment of this disease, the horse must be allowed perfect rest for as long a time as possible.

Curb is a very serious disease, as the slightest appearance of it constitutes "*unsoundness*," and consequently injures the sale of the horse. It generally arises from abuse of some kind,—such as furious driving,

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backing, leaping, &c.,—and is seldom found on horses which have been carefully and judiciously managed.

Bog spavin has been denominated "the windgalls of the hock," for it is inflammation of the mucous bags which lubricate that joint. When the joint is sprained by a sudden wrench or over exertion, these bags become enlarged and inflamed. The sub-cutaneous vein passes over the inside of the hock, and over some of these little bags, and, in cases of inflammation, it is pressed between them and the skin; and by this means the passage of the blood is, in a certain degree, stopped, and in consequence, a portion of the vein becomes *distended*, and causes the tumor known as bog spavin; which is a serious disease, sometimes attended with permanent lameness, and is so deeply seated that it is not easily operated on, and sometimes returns, even after having yielded to medical treatment.

Bone spavin is a more serious disease than the last mentioned, as it is an affection of the *bones* of the hock joint. As this joint is very complicated, it is no wonder that it should occasionally suffer a wrench or strain, especially when the animal is young and the bones have not become properly knit. Bone spavin may be defined as the ossification of the cartilages which unite the splint bone to the shank—which process destroys the elastic action which previously existed between them.

In the treatment of this disease blistering is recommended, as this appliance will cause the absorption of the bony deposit, and the removal of inflammation. When the disease is obstinate, the hot iron must be resorted to.

There are several other diseases of the feet and legs, which we now have not space to describe; but we have mentioned the principal ones, for the purpose of directing attention to the fact, *that they are nearly all caused by neglect or abuse—may be prevented by cautious and careful treatment, and, in some cases, removed by timely applications.*

The feet and legs of the horse are admirably adapted to the performance of their functions; but they cannot bear the concussion to which they are sometimes subjected. With the exception of the horse, none of the domestic animals are subject to the formidable list of diseases which we have just described, and it is not unreasonable to suppose that it was since his subjugation to the tyranny of man that many of these evils have been entailed upon him.

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It is certain that the majority of these diseases have been caused by abuse or accident, and some of them by neglect and mismanagement. Yet, in several cases, the maladies or blemishes become hereditary, and are transmitted by the injured animals to their progeny; and it is on this account that we have advised farmers *never to breed from animals which have been injured by accidents, or subject to diseases of any kind.*

Every breeder of horses is fully aware that a knowledge of the diseases to which they are liable is a matter of *vital* importance in their management. A farmer must frequently be his own farrier. He very often can arrest a disease in the commencement, which, if suffered to go on unchecked, might have baffled all the skill of the veterinarian. Sometimes the *health*, and even the *life* of the horse depends on the owner's ability and promptitude to treat accidental wounds, or sudden and dangerous attacks of disease. It is on this account that we have described some of the most common diseases of the horse, and pointed out some of the simplest and most effectual remedies. And we have invited the attention of the farmer to the fact, that the *simplest disease* sometimes degenerate into the most *inveterate maladies*, when proper precautions have not been taken, or timely remedies applied.

We have endeavored to impress upon the reader the necessity of breeding from superior stock, and this advice cannot be too often repeated. If we wish to have splendid horses, we must select beautiful mares, in every way suited to produce a desirable progeny. We must breed *up* and never *down*. We must breed from the best thoroughbred horses, for these alone are capable of producing animals of superior *speed*, action and endurance; but we must not expect first-rate horses from *old broken down racers, although they have been celebrated in their day.*

We have had considerable experience in Agricultural pursuits, and we have never known a farmer to regret his having paid a *high price* for the services of a superior horse, or any other breeding animal; but on the contrary, we have seen men highly pleased with the result of such an outlay. If farmers cannot procure first-rate brood mares, they can at least command the services of superior stud horses; and this fact is well worthy of attention, for speed, action and endurance are generally derived from the sire.

The same amount of pasture, hay, oats, or provender of any kind,

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that is necessary to raise a colt of a common, unimproved breed, wil suffice to sustain a superior animal; but when both are exposed for sale, the difference in the value of the animals will be apparent. A well bred colt is generally worth more at *two years of age*, than an ordinary one is at the age of *four years*. In such a case as this, the outlay for supporting the latter for two years *is a dead loss*, whilst the cost of raising the good colt is amply repaid.

In the management of the stable, there are several particulars which demand attention—among them is ventilation. No animal can enjoy good health without a plentiful supply of fresh air. When air is taken into the lungs and expelled again, *it is no longer fit to sustain life*—it should give place to a fresh supply. Every building should have two sets of ventilators—*one* to supply fresh air, *the other* to carry off that which has been expelled from the lungs.

In some cases, it is possible to carry ventilation *too far*, and to make the stable *too cold* for the horse. This error should be guarded against, for a certain degree of warmth is necessary to sustain the health of every animal; and it is a well ascertained fact, that a horse will require much less food when the temperature of the stable is properly regulated, and a proper degree of heat sustained.

It has been proved by numerous experiments, that light has a very great effect in promoting the healthy growth of animals as well as vegetables; and that, in fact, when deprived of light, *animals cease to grow*, and are subject to disease. Veterinary surgeons have stated, that in large cavalry barracks, the horses which were kept at the dark side of the barracks never enjoyed good health, and were much more subject to disease than those which had plenty of light.

It is, therefore, a well established fact, that abundance of light is almost as necessary in a stable as fresh air, and should in all cases be provided.

Some horses are subject to *poll-evil*, a disease which is mostly caused by the animal striking his head against the lower edge of the manger. But it not unfrequently arises from the pressure of the halter, or the tightness of the bearing-rein. From whatever cause it arises, the first thing that should be done is to abate the inflammation by bleeding, alterative medicines, and cold lotions to the part; by the use of these means the swelling will in most cases be removed; but if it still

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increases, matter will be formed in the tumor, and its formation should be hastened by poultices, or warm fermentations. As soon as the matter has formed, and before it has had time to eat away the surrounding parts, it should be discharged, and this is best done by a seton; and by the use of this, when taken in time, poll-evil may be perfectly cured.

Doctor J. H. Winter, a distinguished veterinarian, makes the following remarks on the use of the bearing-rein:

"I am anxious, in this place, to add my *anathema* against that inhuman instrument of torture, the bearing-rein. It is no less detrimental to the utility of the animal, than it is replete with agony to him. It must have been invented by a savage, and can only be employed by the insensate. Whence the necessity of unbearing a draft horse, when going up a hill? because the head can be thrown into its natural position and materially assist by its weight in drawing the load. If it is beneficial to loose the head at this time, it must be so on other occasions. Look at the elongated mouths of the unfortunate animals thus wantonly abused, worn by the bit in their unavailing efforts to overcome this inhuman instrument of torture. What produces that dreadful disease poll-evil, but the action of this cruel trap, constraining the head during the violent exercise of the animal, producing inflammation and ulceration, at the point where it articulates with the spine? Poll-evil, so generally supposed to be caused by blows inflicted on the part, is attributable solely to the gagging-rein. I never saw a horse used entirely for the saddle, attacked with this disease. In order to obtain relief from the torment inflicted by the bearing-rein, the poor animal is obliged incessantly to toss up his head. By this strapping down of the head, you say, practically, 'I expect you to draw a certain weight, but I will take away your power of doing so.'"

Some have urged that the bearing-rein contributes to the safety of the animal, who, without it, would be more likely to stumble and fall. However applicable such an arrangement may be to those employed in quick draft, though even with them the utilility of this instrument is not only questionable, but exceedingly doubtful, and it is fast giving way to a more rational method of treatment, it assuredly does not apply to cart horses; for little fear is ever entertained of their falling, and broken bones, so common among the faster breeds, is unknown among them.

In our opinion, Dr. Winter has not spoken too strongly in denuncia-

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tion of the bearing-rein, as the pain and uneasiness which it occasions the horse, are too lightly estimated; and it frequently becomes an instrument of torture in the hands of an ill-tempered, reckless driver. If we want to see a proof of this, we need only observe for a few moments the movements of the hack-driver in Detroit, or any other city. Look at that reckless youth, whipping his horses over the pavement; he comes up to "the stand" at a furious pace, and tries to "pull up;" but on account of the motion they have acquired, the horses cannot stop in the required place, and a violent check is administered, which causes them to fall back on their haunches, and for this the whip is brought into requisition, and they are forced to rush forward; all this time they are suffering from the torturing bearing-rein, which is tightly strained. At length they do stop and the driver alights; but he does not ease the bearing-rein, or consult the comfort of his horses in any way. He seeks an acquaintance, and chats over the row of the last night.

Now observe the movements of that careful driver, who is approaching the stand at a gentle pace. He brings up his horses easily and stops in the exact spot he wishes. The horses are not fretted or alarmed; they seem to like the work they are engaged in. The driver alights, turns, to his horses, eases the bearing-reins, puts on sheets and robes, if the weather is cold, and attends to his business properly. Transactions somewhat similar to those just described take place daily in the stable on the road and in the field. The horse is abused by ill tempered and reckless individuals, whilst, on the other hand, treatment exactly the reverse takes place, and his comforts, health and usefulness are promoted by kindness and care.

Although much has been done towards improving the different breeds of horses in the United States, by private enterprise, and through the instrumentality of Agricultural Societies, still it must be admitted that much more might be performed by the aid of the General Government.

In France, the improvement of the breed of horses receives the greatest attention from the government, and the "Administration for the Breeding of Horses" has divided that country into twenty-seven districts, which comprise two breeding establishments, twenty-four depots for stallions, and one for army horses.

In order to obtain correct information in equine statistics, reliable

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persons were employed, in 1850, to visit every stable in each Arrondissement, and make an accurate return of the number of horses in the Empire, and collect every fact of importance connected with their breeding and management; and all interesting facts and figures are published in a periodical called the "*Atlas Statisque de la production des Chevaux.*"

The "Atlas" has a map of each particular district, on which the principal race-courses and breeding stations are indicated. It also contains portraits of the most celebrated horses, equine statistics and other important matter connected with the breeding and management of horses.

The Emperor of France takes a great interest in everything connected with Agricultural improvement, and he is said to be most anxious that the horses of France shall excel those of England and every other country; and as he is energetic and enterprising, and possessed of power and means almost unlimited, it is not unreasonable to suppose that he will be successful in his undertakings.

In England, the Royal Agricultural Society promotes the improvement of horses by offering very large premiums for competition in that line; and the numerous racing establishments, and fox-hunting clubs, &c., create an extraordinary demand for first-rate horses, and the breeding of them is very profitable.

Prince Albert pays great attention to agricultural pursuits, and takes considerable interest in the raising of excellent horses and cattle; and his good example has already had a marked effect on the aristocracy of Great Britain and Ireland.

When the improvement of the breeds of horses in the United States becomes a national work, we may expect to see a great impetus given to that important branch of rural economy in this country; we *may expect* to see Congress granting a considerable sum, annually, to each of the States, to enable them to give large premiums for the best horses, instead of the small sums which are now awarded; we *may expect* to see proper regulations established, and superior breeds fostered and encouraged in every way, and we *may hope* to see the President of the United States surpassing Napoleon the Third and Prince Albert in his exertions to direct the Agriculturists of a nation to the improvement of the breed of horses.

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Every farmer should have on hand a supply of medicines, &c., which may be all-important in cases of emergency: Epsom salts, aloes, spirits of turpentine, chalk, opium, &c., vinegar for fomentation, linseed for poultices, a drenching-horn, and other necessary apparatus for administering medicine. Many a valuable horse has been lost, for the want of the timely application of a very simple remedy. There are works on veterinary science, and the management of the horse, which are almost indispensably necessary to the Agriculturist; among these may be mentioned "Dodd's American Horse Doctor," "Youatt's Treatise on the Horse," "Allen's Diseases of the Domestic Animals," &c. The useful information and valuable receipes which are to be found in any of these works, may be of *vital* importance in the hour of need.

"Frank Forrester's" new book, on the "Horses of America," contains a vast quantity of interesting matter on the subject of which it treats; and as it is a superbly illustrated national work, containing the experience of the best judges, and the most eminent practical men, *gleaned from every part of the Union*, it should be in the hands of every man who can afford to purchase it.

In conclusion, we will state that, in our efforts to crowd into this Essay matters of the greatest moment, we have purposely omitted things of minor importance; and having done our utmost to make it *as useful and practical* as possible, we now submit it to the consideration and indulgence of the reader.

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PRIZE ESSAY

ON THE

HESSIAN FLY, WHEAT MIDGE,

AND OTHER INSECTS INJURIOUS TO

THE WHEAT CROPS,

TO WHICH WAS AWARDED A PREMIUM BY THE BUREAU OF AGRICULTURE AND STATISTICS OF CANADA WEST, AND PRINTED IN THE TRANSACTIONS OF THE MICHIGAN STATE AGRICULTURAL SOCIETY, BY PERMISSION OF THE AUTHOR,

REV. GEORGE S. J. HILL, B. A.,

Rector, Markham, C. W.

"Mox et frumentis labor additus."

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PRIZE ESSAY

ON THE

INSECTS INJURIOUS TO THE WHEAT CROPS.

[To which was awarded a Premium by the Bureau of Agriculture and State]

CHAPTER I.

INSECTS DESTRUCTIVE TO THE WHEAT CROP.

CONTENTS:

Importance of the subject proposed.—One worthy of the attention of a wise and paternal Government.—The best means of increasing qualified Observers.—European Governments have taken similar steps.—Exertions of Privy Council in England regarding Hessian Fly in 1788.—Premium offered by French Government in 1785.—By Society of Arts in London.—Angoumois Moth.—French Commissioners appointed concerning it.—Difficulty of investigating such subjects from the ignorance of those suffering most from Insects.—The name "Weevil" misapplied to every species of Insect attacking grain.—Importance of properly classifying insects.—Stages of an Insect's life.—Transformations.—Farmers and Gardners should become acquainted with them.—Seven Orders of Insects.

When we consider the vastness of the interests depending upon the wheat crop, forming, as it does, the most valuable item of Canadian exports, and the chief article of food for our population, we cannot be surprised at the anxiety which is common among all classes of the community with regard to the alarming devastation of that important crop by insects of various kinds. The mysterious character of the visitation and the uncertainty which generally exists, respecting the origin, nature, and habits of these creatures, adds not a little to the alarm which their ravages have caused; it well becomes then, a wise and paternal Government to take such steps as may serve to procure the greatest amount of information on this subject, and thus increase the number of qualified observers throughout the country, by whose combined exertions some effectual method of guarding against these ravages may be adopted. This course has been pursued under similar circumstances by some of the most enlightened countries of Europe, who have not considered the interests of Agriculture a subject beneath their notice, or the devas-

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tations of insects which might scourge their countries with famine, as a matter of little consideration.

We learn from Young's Annals of Agriculture,* that when an alarm was excited in England in 1788, by the probability of importing in cargoes of wheat from North America the insect known by the name of the Hessian fly, the Privy Council sat day after day anxiously debating what measures should be adopted to ward off the danger of a calamity more to be dreaded, as they well knew, than the plague or pestilence. Expresses were sent off in all directions to the officers of the Customs at the different out ports respecting the examination of cargoes—despatches were written to the Ambassadors in France, Austria, Prussia, and America, to gain that information, of the want of which they were so sensible; and so important was the business deemed, that the minutes of the Council and the documents collected from all quarters fill upwards of two hundred octavo pages.†

In the year 1785, many provinces in France were so ravaged by cock-chafers, that a premium was offered by Government for the best mode of destroying them. The Society of Arts in London, during many years, held forth a premium for the best account of this insect, and the means of checking its ravages, but without having produced one successful claimant. For more than a century an insect destructive in granaries has prevailed in the Western parts of France, and has gradually been extending in an Easterly and Northerly direction. In the province of Angoumois it continued to increase for many years, till at length the attention of Govermnent was directed to its fearful depredations. This was in 1760, when the insect was found to swarm in all the wheat fields and granaries of Angoumois, and of the neighboring provinces, and the afflicted inhabitants were thereby deprived not only of their principal staple, wherewith they were wont to pay their annual rents, their taxes, and their tithes, but were threatened with famine and pestilence from the want of wholsome bread. Two members of the Academy of Sciences of Paris, the celebrated Duhamel du Monceau and M. Tillet, were then commissioned to visit the province of Angoumois, and inquire into the nature of this destructive insect. The result of their inquiries was communicated to the Academy, in whose history

*Annals xi. 406.

† Kirby & Spence.

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and memoirs it may be found, and was also subsequently republished in a separate volume.*

Such then are some of the instances where Governments have endeavored, by offering premiums and enlisting the services of scientific persons, to procure such information as may serve to avert the calamities caused by destructive insects amongst the valuable products of the soil. And no small part of the difficulty which arose in making such investigations, was caused by the ignorance of the farmers with regard to the nature of the insects from whose ravages they had suffered so much. One would have supposed that men who had lost entire crops by an insect whose transformations must have come under their notice, in every stage of its existence, ought to have been able to give all the information which was required respecting its nature, propagation and economy. So far, however, was this from being the case, that many of those from whom information was sought, seemed to be ignorant whether the insect was a moth, a fly, or what they termed a bug, indeed, so various and contradictory were their statements regarding the Hessian Fly submitted to the celebrated Entomologist, Sir Joseph Banks, by the Privy Council of England, in 1788, that, though he had a large mass of materials before him, he was unable to reach any satisfactory conclusion, and it remained for the American Entomologist, Say, to determine, satisfactorily, the species and genus of the insect in question. The frequent misapplication of names, by persons unacquainted with Natural History, is one of the greatest obstacles to the progress of science, and shows how necessary it is that things should be called by their right names, if the observations communicated respecting them are to be of any service. For instance, the name "Weevil" is used in this country to describe any insect that destroys the wheat plant; it is given to at least six different kinds of insects, two of which are moths, two are flies, and two are beetles. Now nearly four thousand species of weevils have actually been scientifically named and described. When mention, therefore, is made of "the weevil," it may well be a subject of doubt to which of these four thousand species reference is made; if the scientific name of the species in question was made known, this doubt would at once be removed. Every intelligent farmer is capable of becoming a good observer, and of making valuable discoveries in Natural

*Histoire d' un Insecte qui devore les grains de l'Angoumois, 12mo., Paris, 1762.

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History, but if he be ignorant of the proper names of the objects examined, or if he give to them names which have previously been applied by other persons to entirely different objects, the result of his observations will be to confuse instead of throwing light upon the subject.

It will be well therefore to give the names of the orders under which different insects may be classed, before we proceed to consider the nature, habits, and economy of those which are to form the subject of this essay. This subject is particularly important to all persons who are interested in agricultural pursuits. The array of scientific names and terms which it presents may seem formidable, but the few that will be required in treating of the Hessian fly, weevil, &c., may be understood and impressed upon the memory without much difficulty. The advantage of these scientific names is, that they are understood by well educated persons in all parts of the world, whereas the common names by which insects are known in different countries are very limited in their application, and are also often misapplied. The technical words or phrases used by the farmer, the blacksmith, or the carpenter, in their different callings, seem to the inexperienced difficult and unintelligible, yet to the skilful workman are full of meaning and seem quite appropriate. So, too, to the lover of Natural History, the terms of science lose their forbidding and mysterious appearance, and become as familiar to him and as full of meaning as the technical words used by the mechanic are to him in the pursuit of his trade or art.

Before we proceed to the classification of insects, it will be well to prefix a few remarks on their structure, and explain the meaning of the different terms used, together with a short, and consequently imperfect sketch of their anatomy, and the transformations they undergo.

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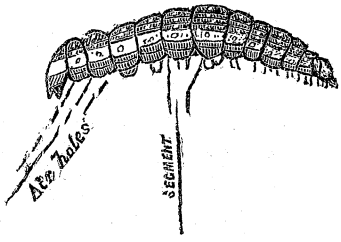
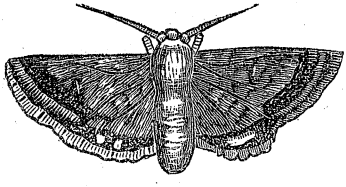


CATERPILLAR—FIG. I.

PUPA—FIG. II.



MOTH—FIG. III.

MOTH.

The word *Insect* is derived from the Latin, and means cut into or notched, and is designed to express one of the chief characters of this tribe, their bodies being marked by several cross-lines or incisions, the parts between these lines being called segments or rings, and consist of a number of jointed pieces, more or less movable on each other. Insects do not breathe through their mouths, but through little holes called spiracles, generally nine in number, along each side of the body. Some, however, have the breathing holes placed in the hinder extremity, and a few young water insects breathe by means of gills. They are never spontaneously generated from decayed animal or vegetable matter, but are produced from eggs. A few, such as some plant lice, do not lay their eggs, but retain them within their bodies till the young are ready to escape. Others invariably lay their eggs where their young, as soon as they are hatched, will find a plentiful supply of food immediately within their reach.

There are three periods in the life of an insect, more or less distinctly marked by corresponding changes in the form, powers, and habits In the first, or period of infancy, an insect is technically called a *larva.* Linnæus, with happy application, adopted this name from the Latin word signifying a *mask;* justly considering that the real form of the insect, while it remained under this covering, was disguised or

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masked. There are two terms in common language corresponding to this, although by no means so expressive, and in themselves indefinite. The larvæ of butterflies, moths, and insects of the same class (lepidoptera) are called caterpillars; while those which are white, somewhat inactive, and are found either in the ground, or enclosed in other substances, bear the common name of grubs or maggots. This name *larva* is applied not only to caterpillars, grubs, and maggots, and to other insects that undergo a complete transformation, but also to young and wingless grasshoppers, and indeed to all young insects before the wings begin to appear. In this period of their lives, during which they eat voraciously, and cast their skins several times, they continue a longer or a shorter period, some only a few days or weeks, others several months or years. It is in this larva or caterpillar state that they mostly do the greatest injury to vegetation.

After the larva has attained its full size, the second change takes place, wherein those insects that undergo a partial transformation, retain their activity and their appetites for food, continue to grow, and acquire the rudiments of wings, while others at this age entirely lose their larva form, take no food, and remain at rest in a death-like sleep. This is called the *pupa* state, from a slight resemblance that some of the latter present to an infant trussed in bandages, as was the fashion among the Romans. The *pupæ* from caterpillars are commonly called *chrysalids*, because some of them, as the name implies, are gilt or adorned with golden spots.

We come now to the third and last state of an insect. After continuing a certain time in the pupa or chrysalis state, it again casts its skin and issues forth a perfect and full grown moth, fly, or beetle, to deposit its eggs for future generations. When an insect assumes its adult or perfect state, Linnæus termed it an *imago*, because having laid aside its mask, and cast off its swaddling bands, being no longer disguised or confined, or in any respects imperfect, it has now become a true representative or *image* of its species, and is qualified to fulfil the laws of nature in perpetuating its kind.

The body of a caterpillar generally consists of a head and twelve segments. In winged or adult insects, two of the transverse incisions are deeper than the rest, so that the body seems to consist of three principal portions; the first of these is the head, the second or middle

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portion the thorax or chest, and the third or hindmost the abdomen or hind-body. The eyes of adult insects, though apparently two in number, are compound, each consisting of a number of single eyes closely united, and incapable of being rolled in their sockets. The eyes of grubs, caterpillars and other completely transforming larvæ, are not compound, but consist of five or six eyelets clustered together on each side of the head. Some, such as maggots, are blind. Near to the eyes are the *antennæ*, two jointed members, corresponding in situation with the ears of other animals, and are supposed to answer the purposes of feeling and hearing. The mouth of some insects is made for biting or chewing; that of others for taking food by suction.

The parts belonging to the thorax are the wings and the legs. The former are two or four in number, the under side of the thorax is the breast, and to this are fixed the legs, which are six in number in adult insects, and in the larvæ and pupæ of those that are subject only to a partial transformation. The parts of the legs are the hip joint, by which the leg is fastened to the body, the thigh (*femur*,) the shank (*tibia*,) and the foot which sometimes consists of one joint only, more often of two, three, four, or five pieces (*tarsi*) connected end to end, like the joints of the finger, and armed at the extremity with one or two claws. The abdomen or hindmost and largest part of the body contains the organs of digestion, and other internal parts, and to it also belong the piercer and the sting with which many winged or adult insects are provided. The parts belonging to the abdomen of larvæ are various, but are mostly designed to aid them in their motions, or to provide for their respiration.

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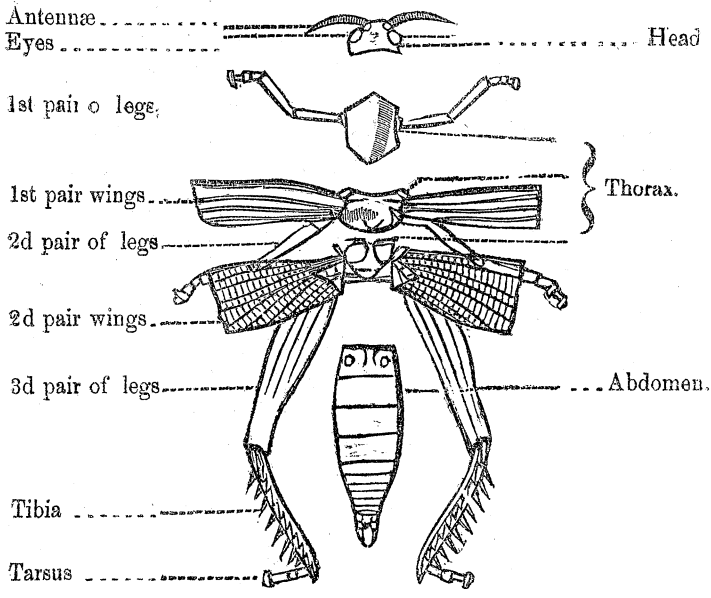

It is most important that all persons interested in gardening and agriculture should become acquainted with the transformations that insects undergo, and of which a short sketch has been given above. They will never be able to check their ravages effectually until they have acquired some knowledge of their habits and modes of existence. For instance, with regard to noxious caterpillars, how few are aware that they proceed from the eggs of butterflies, moths, &c., and that the best methods of preventing their attacks is to destroy the female fly before she has laid her eggs. If the research was carried still further so as to detect the pupa, the work might be more effectually accomplished. Kirby and Spence, in their introduction to entomology, tell us that in Germany the gardeners and country people, with great industry, gather whole baskets full of a destructive caterpillar, and then bury them, thinking by this means they have rid themselves of the pest; but they might as well try to drown a fish with water, for these caterpillars, as they undergo their next transformation beneath the ground, instead of being destroyed by this manœuvre, are placed in a position most favorable to their appearing in greater numbers the following year. Again, Providence has ordained that certain insects should be active agents in

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destroying the noxious species, and preventing their increase. The wheat fly, for instance, is the prey of three parasitical insects, yet ignorant persons have taken these destroyers of our enemies for their parents; we learn from this how necessary it is that agriculturists should be enabled to distinguish their friends from their enemies.

The utility of a knowledge of the natural history of insects in the practical arts of life is forcibly shown in the case of Linnæus, "who at once gave to natural science its language and its laws, and also pointed out its economical advantages." On one occasion this great naturalist was consulted by the King of Sweden upon the cause of the decay of the ship timber in the royal dock-yards. He traced the destruction to the depredations of insects, ascertained their history, and then directing the timber to be sunk under water during the season when these insects made their appearance in the winged state and were engaged in laying their eggs, he effectually secured it from future attacks.* These insects have increased to an alarming extent in some of the dock-yards of France, and in one of them at least, have become very injurious, wholly in consequence of the neglect of warnings given by a naval officer, who was also an entomologist, and pointed out the source of the injury, together with the remedy to be applied.

In order to facilitate the study of insects, of which the varieties are so numerous, it will be necessary to adopt some kind of classification; the basis of this classification is founded upon the structure of the mouth in the adult state, the number and nature of the wings, and the transformations. The first great divisions are called orders, of which the following seven are very generally adopted by naturalists:

I. Coleoptera—(*Beetles*)—In these insects the mouth is furnished with jaws, but destitute of any proboscis, the upper wings appear as two hard cases, protecting the under pair, which alone are organized for flight—transformation complete—larvæ, called grubs, generally provided with six true legs, sometimes also with a terminal prop-leg; more rarely without legs—pupa with the wings and legs distinct and unconfined. Many of these insects, particularly in the larva state, are very injurious to vegetation.

II. Orthoptera—(*Cockroaches, Crickets, Grasshoppers, &c.*)—Insects with jaws, two upper wings thick and opaque, overlapping a

* Kirby and Spence.

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little on the back; two under wings larger and thinner, and folded in plaits like a fan—transformation partial—larvæ and pupæ active, but wanting wings.

III. HEMIPTERA—(*Bugs, Locusts, Plant-lice, &c.*)—Insects without jaws, but having a horny back for suction; four wings, the upper harder than the lower, coriacious (or leathery) and folded—transformation partial—larvæ and pupæ nearly like the adult insect, but wanting wings.

IV. NEUROPTERA—(*Dragon Flies, May Flies, Lace-winged Flies, &c.*)—Insects with jaws, four reticulated or netted wings, the hinder ones largest, without any sting.

V. LEPIDOPTERA—(*Butterflies and Moths*)—The perfect insect without jaws, and lives by suction, the proboscis being spirally coiled, four wings highly developed, covered with bran-like scales—transformation is complete. The larvæ are caterpillars, having six true legs, and from four to ten fleshy prop-legs—pupa with the cases of the wings and of the legs indistinct and fastened to the breast.

VI. HYMENOPTERA—(*Ants, Wasps, Bees, &c.*)—Insects with jaws, four wings, glassy, and marked with strong nerves, the hinder pair being the smallest—tail usually armed with a sting—larvæ mostly like maggots; some like caterpillars—Pupæ with the legs and wings unconfined.

VII. DIPTERA—(*Flies, Mosquitos, Gnats, &c.*)—Insects with a horny or fleshy proboscis, two wings only, and two organs called balancers or poisers behind the wings. The larvæ are maggots—transformation complete.

CHAPTER II.

COLEOPTERA.

Cockchafers—Spring Beetles—Wire Worm—Weevils—Nature and Habits of these Insects—Their devastations—Best means of preventing them.

The insects comprised in this order are very numerous. We shall here simply notice those which are injurious to the wheat crop. These are the *Cockchafers* or *May Flies*, the *Elater* or spring beetles, with their destructive larvæ, the *Wire-worm*, and one of the numerous family of *Weevils*.

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Beetles, it will be remembered, are biting insects, and are provided with two pairs of jaws, moving sidewise; their wings are covered and concealed by a pair of horny cases or shells, meeting in a straight line on the top of the back, and usually having a small tri-angular or semi-circular piece called the scutel, wedged between their bases. Hence, the order to which these insects belong is called *Coleoptera*, a word signifying wings in a sheath. Beetle, in old English, *betl*, *bytl*, or *bitel*, means a biter, or insect that bites.

The Cockchafer belongs to the genus *melolontha*, a word used by the Greeks to distinguish the same kind of insects, which were supposed by them to be produced from or with the flowers of apple trees, as the name itself implies. The following are the general characters of the family of Melolonthadæ, or Melolonthians—the body is oblong, oval, convex, and generally of a brownish color, the head is enclosed in a corselet, which is slightly narrowed in front, and most commonly attached to the elytra or wing-case behind. The antennæ are composed of ten joints, terminating in a mass like a plume, which the insect displays at will, sometimes to the number of seven leaves, larger and more perfectly developed in the males than females. The bodies of melolontha are very often velvet like, and covered with hairs and imbricated scales, differently colored like the butterflies. The powerful and horny jaws are admirably fitted for cutting and grinding the leaves of plants, upon which these beetles subsist, their double claws supporting them securely on the foliage, and their strong and jagged fore-legs being formed for digging in the ground, point out to us the place of their transformation.

The Cockchafer *(Melolontha vulgaris)* is hatched from an egg, which the parent deposits in a hole six inches deep, which she digs for the purpose. The eggs are oblong, of a bright yellow color, and are placed regularly side by side; each female lays from one to two hundred, which she abandons as soon as deposited, generally ascending to the surface again, and perishing in a short time. From the egg are hatched, in the space of fourteen days, sometimes longer, little whiteish grubs or maggots, each provided with six legs near the head and a mouth furnished with strong jaws. They now feed upon the roots of plants with great voracity, sometimes commit ravages of so deplorable a kind as totally to disappoint the best founded hopes of the husbandman. As they increase in size and strength, they become able to make their way with ease under ground, and continue their ravages upon the

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roots of plants. When the grub has attained its greatest size, it is an inch and a half long, and half an inch thick, perfectly white, with a red head, having a semi-circular lip, and a strong pair of jaws. It has two antennæ, but is destitute of eyes. The subterranean existence of these animals is extended to four years, and as their food is not accessible during the cold weather, they bury themselves sufficiently deep in the soil to be safe from the frost, and pass the winter in a state of torpidity. When the spring restores them to animation and activity, they revisit the upper stratum of the ground, having at each annual awakening undergone a change of skin. At the end of three years, they have acquired their full growth as larvæ—they then cease eating, and void the residue of their food. If opened at this period, the skin is found to be completely filled with a mass of white, oily matter, resembling cream, apparently destined as a reserve for the alimentation of the insect during the period of its remaining in the form of a nymph, which is scarcely less than six months. To undergo their final change, these larvæ bore into the earth to the depth of two feet or more; there, by its motions from side to side, each grub forms an oval cavity which is lined with some glutinous substance thrown from its mouth. The larva being thus secured, passes into the pupa state by bursting its skin, coming forth as a soft whitish nymph, exhibiting the rudiments of elytra, antennæ, &c. The insect then gradually acquires consistence and color, becoming of a brownish hue, and thus it remains until the month of February, when the thin fibre enclosing the body is rent, and three months afterwards the perfected beetle digs its way to the surface, escaping from its grovelling mode of life, to soar through the air and disporting in sunshine and shade. From this circumstance, the German name *Maikaefer*, and the English *May bug* or *beetle* has been given. From Kirby and Spence we learn that the larvæ of the Cockchafer will destroy whole acres of grass. They undermine the richest meadows, and so loosen the turf that it will roll up as if cut with a turfing spade.* These grubs did so much injury to a poor farmer near Norwich, that the court of that city allowed him £25, and the man and his servant declared that they had gathered eighty bushels of the beetle. It was for the destruction of these grubs that the Government of France, and the Society of Arts, in London, offered the premiums as mentioned above in the introduction to this essay.

* Kirby & Spence.

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Attempts have been made to turn these insects to good account, by procuring oil from them. M. Breard, Mayor of Honfleur, in France, and proprietor of an oil mill, having offered one franc per bushel for Cockchafers, procured seventeen bushels, from which he obtained twenty-eight quarts of good lamp oil. A kind of grease has also been made from them in Hungary.*

In their winged state, these beetles, with several other species, act as conspicuous a part in injuring the trees, as the larvæ do in the destruction of herbage, young wheat, and other plants; after escaping from the ground, in their perfect state, they pass the greater part of the day upon trees, clinging to the under side of the leaves, in a state of repose. As soon as evening approaches, they begin to buzz among the branches, and continue on the wing till near midnight. Their flight is very irregular, darting hither and thither, hitting against objects in their way with a force that often causes them to fall against the ground. They frequently enter houses at night, attracted by the lights. The boldness with which they will rush against objects, seeming to threaten an attack without the power of causing harm, has caused them to be called *dors*, that is, darers; while their seeming blindness and stupidity have become proverbial in the expressions "blind as a beetle," and beetle headed. The ravages they commit amongst the leaves of the trees and shrubs is sometimes so great as to resemble a visitation of locusts, and is the cause of much misery to the inhabitants of those districts infested by them. Mouffet relates that in the year 1574 such a number of them fell int the river Severn, as to stop the wheels of the water mills; and in the Philosophical Transactions it is stated that in the year 1688 they filled the hedges and trees of Galway, in such infinite numbers, as to cling to each other like bees when swarming; and when on the wing, darkened the air, annoyed travelers, and produced a sound like distant drums. In a short time the leaves of all the trees, for some miles round, were so totally consumed by them, that at midsummer the country wore the aspect of winter.*

Every attentive observer must be familiar with the appearance of the cockchafer as it flutters about in the warm evenings of May, although many are not aware of the destruction it commits amongst plants and trees in its larva, as well as in its perfect state; as these beetles frequently

* Kirby & Spence

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commit serious ravages on fruit trees it may be well to mention that they can be effectually exterminated by shaking them from the trees in the morning upon clothes spread to receive them when they fall, after which they should be thrown into boiling water to kill them, and may then be given as food to swine. As the methods of destroying the grubs of this beetle are similar to those employed for eradicating the wire-worm or grub of the spring-beetle—they will be mentioned when treating of the latter insect.

The *Elater*, or spring-beetle, belongs to a group of coleopterous insects, forming the type of the order *Elateridæ*, many of which species are the parents of the numerous kinds of *wire-worms* which so dreadfully infest the crops of the farmer. These wire-worms are not to be confounded with the American wire-worm—a species of *Inlus*—which is not a true insect, but belongs to the class MYRIAPODA, a name derived from the great number of feet with which most of the animals included in it are furnished, whereas the true wire-worm has only six feet. The body of the elater is comparatively long, the head is sunk to the eyes in the thorax, the antennæ are of moderate length, and more or less notched on the inside. The legs are short and slender, and the feet are five-jointed; on the under side of the breast, between the bases of the first pair of legs, there is a short blunt spine, the point of which is usually concealed in a corresponding cavity behind it. When the insect by any accident falls upon the ground, its legs are so short and its back so convex, that it is unable to turn itself over, it then folds its legs close to its body, bends back the head and thorax, and thus unsheaths its breast spine; then by suddenly straightening its body, the point of the spine is made to strike upon the edge of the sheath, which gives it the power of a spring, and reacts upon the body of the insect so as to throw it perpendicularly in the air. Thus, by a half somerset, they have the power of regaining their natural position; hence the entomological name of elaters, and the popular name of spring-beetles, skip-jacks, click-beetles, &c. The elaters are of various colors, some are of a reddish brown, some mouse colored, and some black.

The eggs of these beetles are very minute, of a yellowish white color and slightly oval. The larvæ are at first most invisible to the naked eye; they grow slowly, and become, when full grown, three-fourths of an inch in length; they have a wire-like form, a smooth surface, and

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extreme toughness, hence they are called *wire-worms.* They live five years in the proper state of larvæ, and cast off their skin, probably, at three successive periods, as they increase in size. The wire-worm is of a pale ochreous color, becoming darker when dead, with a few hairs scattered over its skin; the back is round, the belly rather flat, the head wedge-shaped; there are twelve abdominal segments, the three first being furnished with six short legs. There are two little antennæ in front of the head; they have each three joints, and similar to the palpi in form; on each side of the head behind the antennæ is a minute dot, like a little eye. When the wire-worm arrives at maturity, it decends a considerable depth into the earth, and forms there an oval cell; it then casts its skin again and becomes a pupa. The pupa is long and narrow in form like the perfect insect, but is of a yellowish white color; the insects commonly remain in this state two or three weeks. When the appointed time for their transformation comes, they burst from their tombs and arrive at the surface perfect beetles.

The most important crop which suffers from the wire-worm is wheat. A writer in the Linnean Transactions estimates the loss of crops of this grain sown upon clover leys, recently broken up pastures, pea and bean stubbles, at about a twentieth part of the whole; the proportion is sometimes greater, and sometimes the destruction is so excessive as to require the whole field to be ploughed up. The attacks in general do not begin until spring, and are indicated by the dying off of the lower leaves, and in the worst cases by the falling of the plant. The wire-worm attacks other crops besides wheat, such as oats and barley; oats, when sown on newly broken leys, suffer excessively; but wheat suffers the most among the grain crops, and white turnips among the green ones. The writer just above mentioned estimates the loss of wheat in England, from the ravages of the wire-worm, annually, at 60,000 bushels.

Three of the most effectual preventatives of the ravages of the wire-worm are, judicious fallowing, the judicious breaking up of leys and pastures, and the judicious surface treatment of ploughed lands. A clean and careful summer fallow, when accompanied with such a thorough burning of rubbish as will surely destroy both the eggs and larvæ of these beetles, is a perfect remedy against wire-worms, and if it occurred at regular intervals would always be a more or less powerful hindrance to their obtaining any lodgement, more especially if all the

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couch grass and other similar weeds whose roots might afford sufficient sustenance to the worms till the corn crop had struck root, were carefully gathered and burnt. In breaking up any old pasture a breast-plow should be used, to take off *not more than two inches* of the turf in the first instance, which will secure the crop from any attacks of the wire-worm; for an additional depth of two inches has so encouraged the pest that it has been known to destroy an entire field of wheat. The advantage of the shallow paring is, that the roots of the herbage die; whereas, if the sod is ploughed four inches deep they lie and vegetate, and afford sufficient sustenance to the worms until the wheat plants are forward enough to furnish them with a more agreeable food. Planting the soil with white mustard or woad has been found an effectual method of banishing the wire-worm in England, there being something in those crops very obnoxious to these insects; but this remedy is not applicable to Canada as such crops are not grown here.

Another good remedy for wire-worms is the application, by sprinkling, top dressing, or intermixture with manure, of some substance which, without injuring the plants, would kill the larvæ. Any strong saline solution would probably have the desired effect, and at the same time would benefit the soil. Nitrate of soda, thus applied, proved in one case most beneficial. Lime and soot if applied to the soil before sowing any grain will, it is affirmed, kill the wire-worms. Common salt on light lands is highly efficacious in destroying them. In England they slice potatoes, turnips and other vegetables, and place them over the field or garden which attract the larvæ, and they are then picked off every morning by women and children appointed for this purpose.

Bierkander, a Swedish observer, who tried many experiments in order to destroy these pests, found after all that hand-picking is one of the best remedies. On one occasion he employed a child to follow the plow and pick up the worms; by this means three hundred and fifty-one were collected in a piece of land 600 feet long and 56 broad. He considered it would be serviceable if children always followed the plow and gathered these yellow worms into a bottle, as they would by that means be considerably diminished, and perhaps in time completely exterminated.

Birds of many kinds, both tame and wild, are greedy destroyers of

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wire-worms; the chief are ducks, turkeys, common poultry, night-hawks, and above all, rooks. These last will fearlessly follow the plow to feed upon the wire-worms and other insects; the form of his bill, his strength and assiduity especially adapt him for detecting these larvæ in their hiding places. A writer on this subject states that he had repeatedly examined the crops of rooks: in six young, that had been shot, the crops were nearly filled with wire-worms; in the crops of others he found the larvæ of the cockchafer and other grubs. The following remarks by a Mr. T. G. Clithero are very interesting: "In the neighborhood of my native place, in the county of York, is a rookery belonging to W. Vavasour, Esq., of Weston, in Wharfdale, in which it is estimated that there 10,000 rooks: that one pound of food a week is a very moderate allowance for each bird, and that nine-tenths of their food consists of worms, insects, and their larvæ. Here, then, there is the enormous quantity of 468,000 lbs., or 209 tons of worms, insects, and their larvæ, destroyed by the rooks of a single rookery in one year. To every one who knows how very destructive to vegetation are the larvæ of insects as well as worms fed upon by rooks, some slight idea may be formed of the devastation which rooks are the means of preventing."

These facts regarding the destruction of injurious insects by birds are well worthy of the earnest attention of Canadian farmers; too many of whom show such a want for taste in neglecting to plant shrubs and trees about their premises, and thus deprive insect-devouring birds of necessary shelter, and encouragement to increase in cleared settlements; nature has wisely provided a remedy for nearly every evil, bu by not paying attention to the economy of nature, man by his short-sightedness, too often deranges its operations, and renders its wise provisions useless. Although the ravages of these wire-worms are not so alarming in their extent in Canada as they have proved in Europe, yet, as the settlements become older, and the slovenly farming so often witnessed, is pursued, we may expect their ravages to increase. Our insect-eating birds ought, therefore, to be cherished and encouraged for their valuable services in destroying these plagues. Although we have no rooks, we have crows, which may be seen in spring feeding on the grubs turned up in a newly plowed field; possibly, as the climate of Canada becomes ameliorated and the winters less severe, colonies of

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rooks may be induced to take up their residence amongst us.* Those who have never seen a rookery, are referred to that quaint description of one which is so happily portrayed by Washington Irving in his "Bracebridge Hall."

In addition to birds, many quadrupeds such as the weasel, skunk, rat and mole, are devourers of these beetles, which are also sometimes the prey of other species of coleopterous insects. In France the golden ground beetle (*Scarabœus auratus*) devours the female dor or chafer at the moment when she is about to deposit her eggs. This beetle, with several others equally predaceous, are found on this continent, and contribute to check the increase of the destructive Melonthadæ.

The WEEVIL is the next of the coleopterous order of insects which will engage a portion of our attention. This tribe is very numerous—nearly 4,000 species having been scientifically named and described—in consequence of this fact many have ridiculed the idea of attempting to make the agricultural community acquainted with the leading characteristics of those species which are injurious to vegetation—more especially to the wheat crop. Now it so happens that only *one* species of the weevil, the *calandra grannaria*, or *curculio granarius* of Linnæus is found to destroy wheat; and it does not attack the growing crop, but the stored grain. As has been mentioned before, the name "weevil" has been given in this country to at least six different kinds of insects, two of which are moths, two are flies, and two are beetles; this has caused a great deal of confusion, and many communications to agricultural and other journals from intelligent and observant persons have been of no practical use in consequence of this misapplication of names. A few remarks, therefore, on the grain weevil, although it is not actually injurious to vegetation, may be useful as tending to prevent future mistakes.

*Since the above was written, the author has learnt that an attempt to introduce rooks from England into Virginia, U. S., has been tried once but proved a failure.

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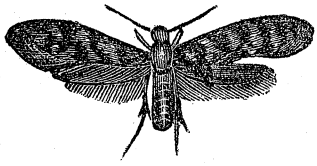
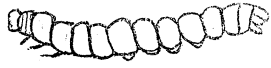


Nat. size.

CATERPILLAR.

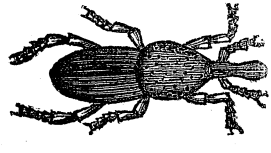
THE WOLF—*Magnified.*



CATERPILLAR—*Magnified.*

The weevils belong to a group called *Rhynchophoridæ*, or snout-bearers. The characters of this group are well defined and enable a very superficial observer readily to distinguish its species from those of all other families, except, perhaps, the *Xylophagi*, or wood-eaters. The snout or beak of a weevil is its grand characteristic. Another distinctive mark of the whole family is furnished by the antennæ, which are usually knobbed at the end, and are inserted on the muzzle or snout, on each side of which there is generally a short groove to receive the base of the antennæ when they are turned backwarks. Their feelers are very small, and for the most part concealed in the mouth. Few weevils are much observed on the wing, many which confine themselves to the ground have the elytra or wing cases soldered together at the suture, and are incapable of using them. The body is usually more or less arched lengthwise, and in many instances is pear-shaped. The legs are short, not fitted for running or digging. The feet are four-jointed, thus distinguishing them from the melolonthians, the feet of which have five joints. They make use of their snouts not only in feeding, but in boring holes into which they aftewards drop their eggs.

WHEAT WEEVIL.—*Calandra Granaria.*
(*Natural size.*)



WHEAT WEEVIL.—(*Magnified.*)

The larvæ of the snout beetles are mostly short fleshy grubs, of a whitish color, and without legs. The head is covered with a hard shell, and the segments of their bodies are very convex. These characters will serve to distinguish them from the larvæ of flies. Their

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jaws are strong and horny, and with them they gnaw those parts of plants which serve for their food. It is in the larvæ state that weevils are most injurious to vegetation. Some of them bore into and spoil fruits, grain and seeds; some attack the leaves and stems of plants, causing them to swell and become cankered; others penetrate into the solid wood, interrupt the course of the sap, and occasion the branch above the seat of attack to wither and die. Most of these grubs are transformed within the vegetable substances upon which they have lived, some, however, when fully grown, go into the ground, where they are changed to pupa, and afterwards to beetles.

The true *wheat weevil* (*Calandra granaria*) is a slender beetle of a pitchy red color, about one-eighth of an inch long; its antennæ are secretly longer than the head and the rostrum or snout; the terminal joint of its antennæ is a somewhat ovate club. The snout is slender and rather long, its thorax is elongate and a little narrowed in front, and covered with long oblong punctures; its elytra do not cover the abdomen, and are marked with deep lines, faintly punctured in the bottom. The larva is a small whitish worm about a line in length, comprising nine segments; the body soft, and the only external organs a pair of strong jaws. The pupa is white and somewhat transparent, and lies within the envelope of a grain of wheat like the kernel of a nut within the shell. The female deposits her eggs upon the wheat after it is housed, and the young grubs, when hatched, immediately burrow into the wheat, each individual occupying a single grain, the substance of which it devours so as to leave nothing but the hull; and this destruction goes on within, while no external appearance leads to its discovery, loss of weight being the only evidence of the mischief caused among the grain. The fecundity of the female is so vast, that in a single season (according to one authority) upwards of twenty-three thousand individuals may descend from one mother; Kirby and Spence say six thousand descendants may spring from a single pair; even from this calculation we may estimate the countless millions, equal in their effects to an Egyptian plague, which may spring up when the breeders are numerous. The perfect insect, also, feeds upon the grain, attacking kernels which have not been used by the larvæ, and eating portions of their substance; it does not appear to consume much of the in-

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terior of the grains, but seems to inflict damage principally by its numerous piercings and fractures of their envelopes.

There have been many remedies proposed against the attacks of the corn weevil. The passing of the grain through a fanning machine, as near as possible to the time when the great proportion of the insects are transforming from larvæ to pupæ, is cheaper and easier than any other proposed method, and if all the damaged grains were blown away, as from being very light they probably would, the insect might in a season or two, by this means, be expelled from the premises hitherto infected. These weevils may be effectually destroyed by kiln-drying the wheat; there is danger, however, of over-drying or calcining the grain by this process. Another scheme proposed, which is much approved, is to provide a small heap of grain, (barley is the best, as the insects are fondest of it,) this is to be placed near the principal store, which is then to be continually moved about; the weevils being fond of quiet, will resort to the undisturbed heap. When collected there in sufficient numbers, they may be scalded in the heap with boiling water. This practice has been attended with highly favorable results. Grain that is kept cool, well ventilated, and is frequently moved, is said to be exempt from attack.

The *pea weevil (Bruchus Pisi)* is one of the most destructive of this family to the growing crops of the farmer. It is known in this country by the incorrect name of the pea-bug; but it is a weevil, and is supposed to be a native of the United States. The original meaning of the word Bruchus means devourer; a most appropriate name for this insect, so destructive to the pea crop.

Few people are aware how many insects they swallow unconsciously, while enjoying the luxury of early green peas. If the pods are carefully examined, small discolored spots may be discovered inside, each one corresponding to a similar spot on the opposite pea. If this spot be opened, a small whitish grub, destitute of feet, will be found; this is the larva of the pea weevil, which lives upon the substance of the pea, and arrives at its full size by the time that the pea becomes dry. This larva bores a round hole from the hollow in the centre of the pea to the hull, but leaves the latter, and generally the germ, untouched Hence these damaged peas will frequently sprout and grow. The larva is transformed to a pupa within its cell in the pea, in the autumn,

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and before the spring, casts its skin again, becomes a beetle, and gnaws a hole through the thin hull in order to make its escape—which frequently does not happen before the peas are planted for a crop. The weevil lays its eggs singly in the punctures which it makes in the tender pod, just as the peas are formed. The grubs, as soon as they are hatched, penetrate the pod and enter the peas, making a hole so fine as hardly to be discovered, and which is soon closed up. Sometimes every pea in a pod will contain a weevil grub, and in some parts so great has been the injury, that the inhabitants have been compelled to give up the cultivation of this crop.*

In order to destroy this pea weevil, one plan recommended is to keep the seed peas one year over before planting them, in tight vessels. Others recommend putting the peas in hot water just before sowing them, by which means the weevils will be killed, and the sprouting of the peas will be quickened. Late sown peas escape the attacks of this weevil, as they are limited to a certain period for depositing their eggs.

The curculio which attack plums, peaches, and many other fruits, also causing a black warty disease on the branches of plum trees, is a beetle of the weevil tribe, called *Rhynchœnus Nenuphar*, or *Curculio Nenuphar*, but as a description of these would be foreign to the proposed object of the present Essay, we will not now dwell upon them.

The rice weevil *(Calandra Oryzæ)* is very destructive in the Southern States to the growing crops of rice; it also attacks stored grain. The remedies for them are the same as those mentioned for the grain weevil, *Calandra Gnanaria.*

CHAPTER III.

ORTHOPTERA.

No Insect under this order particularly destructive to wheat.—Locusts.

This order of insects will need but a very brief notice from us on the present occasion, for although it embraces the family of locust so well known for ages as extensive destroyers of vegetation, yet as Canada has so far escaped their ravages, they cannot receive a place in an

* Harris.

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essay devoted principally to insects injurious to the wheat crop. We may observe, in passing, that locusts at various times have appeared in great abundance in different parts of the United States. In the State of Maine they often appear in great multitudes, and are greedy destroyers of the half-parched herbage. In 1749 and 1754, they were very numerous and voracious—no vegetables escaped them—they even devoured the potato tops; and in 1743 and 1756, they covered the whole country and threatened to devour every thing green. So great was the alarm they occasioned, that days of prayer and fasting were appointed on account of the threatened calamity. Their voracity extended to every vegetable, even to the tobacco plant and the burdock. The garments also of laborers, hung up in the field while they were at work, were destroyed in a few hours.* In 1838, the vicinity of Baltimore, Maryland, was infected by insects of this kind, and the crops of the Mormons, in the territory of Utah, have suffered dreadfully from their ravages.

CHAPTER IV.

HEMIPTERA.

Chinch Bug.—Thrips —Devastations and Remedies.

Under this head or order are classed the numerous family of Aphides and Bugs, which infest plants and commit great depredations. Of these, the *Chinch Bug* and *Thrips* are found to be hurtful to the wheat crop.

The *Chinch Bug.* The word bug is used by entomologists for various kinds of insects, all, like the bed-bugs, having the mouth provided with a slender beak, which, when not in use, is bent under the body, and lies upon the breast between the legs. Bugs have no jaws, but live by sucking the juices of animals and plants, which they obtain by piercing them with their beaks. Owing to the peculiar construction of the wing-covers of these insects, the hinder half of each being thin and filmy like the wings, while the fore part is opaque, the order is called *Hemiptera,* literally half wings. There are other insects having the same kind of beak, whose wing-covers are entirely transparent, and are yet classed under this order, because they so much resemble them in

* Harris.

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structure and habits. Bugs undergo three transformations, but retain nearly the same form in all their stages, the transformations consisting of a gradual development of wing-covers and wings, and increase in the size of their bodies.

Kirby and Spence, in their Introduction to Entomology, mention the chinch bug in the following terms:—"America suffers also in its wheat and maize from the attack of an insect, which, for what reason I know not, is called the "chintz bug-fly." It appears to be apterous, and is said in scent and color to resemble the bed-bug. They travel in immense columns from field to field, like locusts, destroying everything as they proceed, but their injuries are confined to the States south of the 40th degree of north latitude. From this account the depredator here noticed should belong to the tribe of *Geocorisæ*, Latreille; but it seems very difficult to conceive how an insect that lives by suction, and has no mandibles, could destroy these plants so totally."

This description of the chinch bugs is not quite correct. They are not confined to the States south of the 40th degree; for Harris found one in his own garden in Cambridge, Massachusetts, and also received specimens from Wisconsin and Illinois. He also ascertained that the chinch bug is the *Lygæus leucopterus*, or white-winged Lygæus described by Mr. Say. In its perfect state it is not apterous, but is provided with wings, and then measures about three-twentieths of an inch in length. It is readily distinguished by its white-wing covers, upon each of which there is a short central line, and a large marginal oval spot of a black color. The rest of the body is black and downy, except the beak, the legs, the antennæ at base, and the hinder edge of the thorax, which are reddish yellow, and the fore part of the thorax, which has a grayish lustre. The young and wingless individuals are at first bright red, changing with age to brown and black, and are always marked with a white band across the back. The eggs of the chinch bug are laid in the ground, in which they have been found in great abundance, at the depth of an inch or more. They make their appearance on wheat about the middle of June, and may be seen in their various stages of growth on all kinds of grain, on corn, and on herds grass, during the whole summer.*

The *Thrips* are such exceedingly minute insects, that to the naked eye they seem but as little specks, or rather like short lines, not exceed-

* Harris.

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ing the length and thickness of the letter *i*. In spring, these minute creatures may be found running about the petals of flowers, particularly the dandelion; but in summer and autumn they fly into houses in considerable numbers, alighting upon the hands and face, and occasioning that troublesome irritation which many people experience during hot weather, without knowing the cause. These insects are highly noxious to the farmer, by deriving their nourishment from the embryo grains of the wheat plant, insinuating itself between the internal valve of the corolla and the grain, it inserts its instrument of suction in this last and causes it to shrivel by depriving it of all its juices. In 1805, one-third of the wheat crop on the richest plains of Piedmont, was destroyed by this seemingly insignificant little insect; in the same year the wheat in England also suffered from the same cause. In its larva state this insect is smaller than the maggot of the wheat fly; it is orange-colored, and is provided with six legs, two antennæ, and a short beak, and is very nimble in its motions. It may probably be destroyed by giving the grain a thorough coating of slacked lime. The *Aphides* or plant-lice, to which family the thrips belong, are exceedingly prolific; Reaumur computes that each aphis may produce about 90 young, and that, in consequence, in five generations the descendants from a single animal would amount to the astonishing number of 5,904,900,000, or nearly six billions.

CHAPTER V.

LEPIDOPTERA.

Angoumois Moth.—Noctua Cubicularis, or Grain-Worm.—Tinea Granella, or Grain Moth.—Anacampsis Cerealella, or Angoumois Moth.—History.—Devastation.—Remedies.

This order comprises butterflies, hawk-moths or splinges, and moths. Their larvæ are called caterpillars, than which there are no insects so commonly and so universally destructive; they are inferior only to locusts in voracity, and exceed them in their powers of increase. As each female usually lays from two hundred to five hundred eggs, some idea may be formed of the millions which would spring from one hundred butterflies in the course of three or four generations. Caterpillars generally subsist on vegetable food, hence their injuries to vegetation are very great, and must have attracted the notice of every attentive observer.

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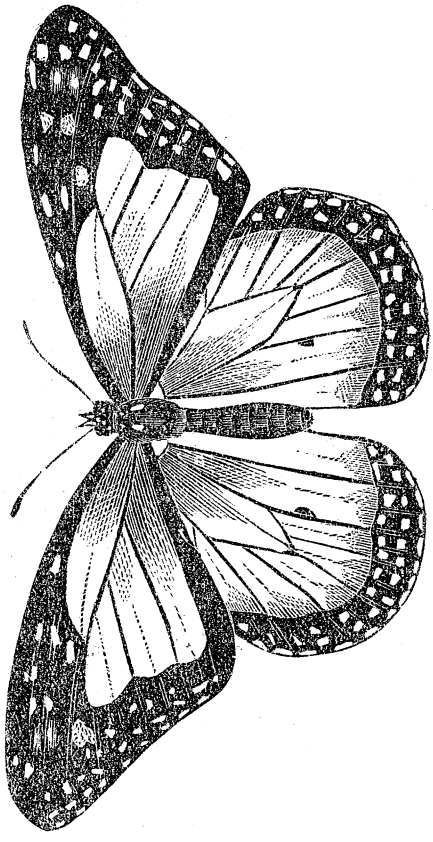

The word *lepidoptera* means scaly wings. The mealy powder with which the wings of butterflies and moths are covered, when magnified by a powerful lens, are found to consist of little scales, lapping over like the scales of fishes. The body of these insects is also more or less covered with the same kind of scales, together with hair or down in some species.

All lepidopterous insects may be arranged under three primary divisions, which are perceptible to the most inexperienced observer:

1st. The Butterflies *(Papiliones)* have the antennæ knobbed at the end, and fly by day only.

2nd. The Hawk-Moth *(Sphinges)* generally have the antennæ thick-

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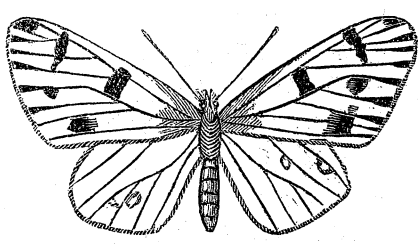
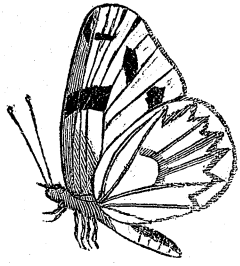
ened in the middle, and tapering at each end. They fly in the morning and evening twilight.

3rd. The Moths *(Phalenæ)* the antennæ taper from the base to the extremity, and are either naked or are feathered on each side. They fly mostly by night.





The insects of this order, that are injurious to wheat, are the larvæ of the *noctua cubicularis*, the *tinea granella*, and the *anacampsis cerealella*, all of them moths, and the two latter confining their depredations to stored grain.

Noctua Cubicularies.—The larvæ of these moths are small caterpillars, which have been found very injurious to the wheat crop in England, by eating the grain before and after it is ripe. It is figured and described by Mr. John Curtis, in the Journal of the Royal Agricultural Society of England. They also exist in North America, and are known by the names, *wheat-worm*, *gray-worm*, and *brown-weevil*. The name of *grain-worms* has likewise been applied to them, hence, they may have sometimes been confounded with the larvæ of the wheat-midge, *Cedidomyia Tritici;* they are, however, completely distinct, and do not belong to the same order of insects. The larva is from three to five-eighths of an inch long, of a yellowish brown color, it has twelve legs, and has the power of spinning and suspending itself by a thread. It feeds on the kernel in the milky state, and also devours the germinating end of the ripened grain. It is found in great numbers in the chaff when the grain is threshed. Unlike the maggots of the wheat fly, with which they have been confounded, they remain devouring the grain until after the time of harvest. They have been seen in immense numbers upon barn floors after the grain has been threshed, but they soon crawl away and conceal themselves in crannies, where they most likely undergo their transformations. They are supposed by some to

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be identical with the clover-worm. They may be distinguished from the maggot of the wheat-midge by their brownish color, being three-eighths of an inch in length, having legs, and capable of suspending themselves by a thread of their own spinning; whereas the wheat-midge maggot is of a deep yellow color, only one-tenth of an inch long, destitute of legs, and unable to spin a thread.

These destructive caterpillars may be separated from the wheat by threshing and winnowing; the chaff containing them should be put into large tubs and boiling water poured upon it sufficient to kill all the insects.

Tinea Granella, or corn moth.—This insect sometimes attacks grain in the sheaf, but principally infests granaries, feeding on all sorts of grain, but most partial to wheat. The perfect moth does not exceed half an inch in length; its wings, when laid over each other, slope at the sides. The upper wings are whitish colored, with dark brown and dusky spots; its body is brown, variegated with white, and its head has a thick tuft of yellowish-white hairs. Thirty eggs or upwards are laid by each female; they are so minute as to be scarcely observable to the naked eye; one or two are attached to each grain of wheat. The larva is speedily hatched, and immediately bores its way into the grain, closes up the opening by which it entered, and remains in the interior till it eats up every thing but the husk; this process it keeps on repeating in different grains till it is full grown; it glues together all the grains which it has used, and tracks all the path over which it passes with a silken and somewhat excrementitious web; when full grown, it leaves the chain of emptied grains on which it has fed and runs across all the neighboring grain, covering it with greyish-white webs.

The full grown caterpillar is about half an inch long and has sixteen feet, its body is yellowish-white, its head brownish-red, and its neck marked with two transverse brown stripes. When running across the grain they are in search of a retreat in which to undergo their transformation; they get into cracks in the floor and around the corn bin, and each spins around itself an oval pod or cocoon about the size of a grain of wheat, from which in due time the full grown moth escapes. This insect prevails in all parts of North America, and has been mistaken for the corn weevil.

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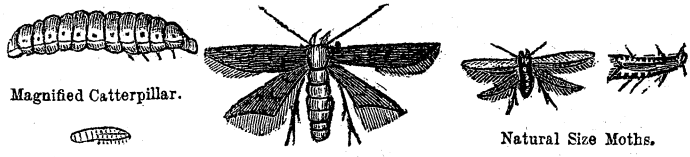
In order to destroy these insects when the existence of the chrysalids is known or suspected, the floor walls and roof of the granary ought to be well swept with a hard brush, or washed with some caustic solution, such as the ley of wood ashes. When the caterpillars have effected a lodgment, and the corn is not to be used for sowing, the whole of the grain should be kiln dried.

ANGOUMOIS MOTH.



Magnified Catterpillar. Natural Size Moths.

Natural Size Catterpillar. Magnified Moth.

ANACAMPSIS CEREALELLA, or *Angoumois Moth*, has been found to be more destructive in granaries in some provinces of France than the preceding kind. In its perfect state it is a little moth of a pale cinnamon-brown color above, having the lustre of satin, with narrow broadly fringed hind wings of an ashen or leaden color, two thread-like antennæ, a spiral tongue of moderate length, and two tapering feelers turned over its head. It lays from sixty to ninety eggs, placing them in clusters of twenty or more on a single grain. From these are hatched, in from four to six days, little caterpillars not thicker than hairs. They immediately disperse, and each one selects for himself a single grain and burrows into it at the most tender part, commonly where the germ springs forth. Remaining concealed there it devours the mealy substance within the hull; and this goes on so secretly that the loss is only detected by the softness of the grain or by deficiency in the weight. The caterpillar is not more than one-fifth of an inch long, of a white color, with a brownish head, six small pointed legs, and ten very small prop legs. Having eaten out the heart of the grain, which is enough for all its wants, it spins a silken web or curtain to divide the hollow grain lengthwise into two unequal chambers, the smaller containing the rejected fragments of its food, and the larger cavity serving instead of a cocoon, wherein the insect undergoes its transformations. The insects of the first, or summer brood, come to maturity in about three weeks, remain but a short time in the chrysalis state, and turn to winged moths in the autumn, and at this time may be found in the evening in great

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numbers, laying their eggs on the grain stored in barns and granaries The moth-worms of the second brood remain in the grain through the winter, and do not change to winged insects till the following summer, when they come out, fly into the fields at night, and lay their eggs on the young ears of the growing grain. Besides the two principal broods others are produced during the whole summer, the production of the insects being retarded or accelerated by differences in the temperature of the air. When damaged grain is sown it comes up very thin, the infected kernels seldom sprout, but the insects lodged in them remain alive, finish their transformations in the field, and in due time come out of the ground in the winged form."*

The Angoumois moth is unknown in England; but has been found in several parts of the United States, more particularly those between the thirty-sixth and fortieth parallel of north latitude. It has also been found in New England, where the cold weather has probably checked its progress. There is reason to believe that it has been introduced into the States from Europe, *and persons fond of introducing seed wheat from foreign parts into this country should be on their guard, lest they bring in this plague also.*

These moths may be effectually destroyed by drying the damaged grain in an oven or kiln, at a heat of one hundred and sixty-seven degrees, Fahrenheit, for a period of twelve hours. Or the heat may be reduced to one hundred and four degrees and the time lengthened to two days. Fumigation in close vessels with the gas of burning charcoal, is an effectual remedy which has the advantage of neither imparting a bad flavor to the grain, or impairing its powers of vegetating. A low temperature checks the propagation of the corn moth; the larvæ not being able to survive the winter in those places where the thermometer falls to zero.

CHAPTER VI.

HYMENOPTERA.

Joint-worm—Habits—Ravages—and Preventives.

Under this order comes the Joint-worm (*Eurytoma hordei*), an insect which has committed great depredations in the wheat crops of Vir-

*Harris, who compiled the above from the "Memoires" of Reaumur.

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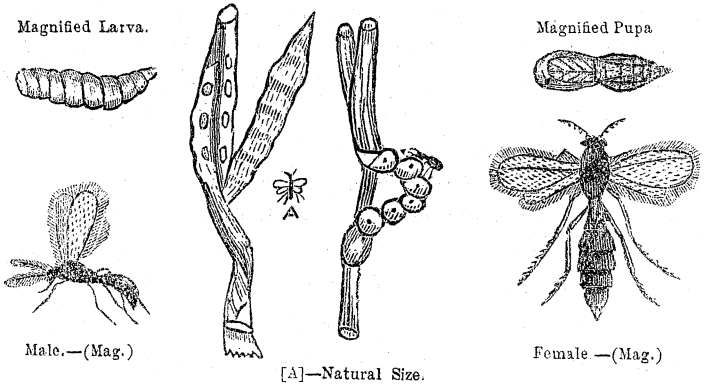
ginia, and other parts of the United States. The body of the Eurytoma Hordei is jet black, and slightly hairy. The head and thorax are opaque, and rough with dilated punctures. The hind body is smooth and polished. The thighs, shanks, and claw joints are blackish; the knees and other joints of the feet are pale yellow. The females are twelve or thirteen-hundredths of an inch long. The males are rather smaller, and are distinguished from the females by the following characters. They have no piercer. The joints of their antennæ are longer, and are surrounded with whorls of little hairs. The hind body is shorter, less pointed behind, and is connected with the thorax by a long stem or peduncle. The female lays several eggs in the outer sheath of the stalk of the wheat plant, above the joints, sometimes in the joint itself, the substance of which becomes enlarged and distorted. The hollow of the stem becomes entirely obliterated at some parts by the pressure of the enlarged sheath, while the surface exhibits several long pale spots, slightly elevated like a blister. Each of the blistered spots covers an elongated cavity, which contains a footless worm or maggot, about the eighth of an inch in length, of a pale yellow color, of an oval form, and divided into thirteen segments.*



[A]—Natural Size.

JOINT WORM.—*(Eurytoma hordei.)*

The ravages of the joint worm, according to Harris, in the wheat fields of Virginia, were first observed in Albemarle county, about ten years ago, and have since extended to an alarming extent in many of the adjacent counties; the loss occasioned amounting often to one-third

* Patent Office Report, U. S., 1854.

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of the crop, in some cases, the farmers did not reap as much as they sowed. As the disease is seated mostly near the base of the straw, in or near the second or third joint, the greater part of the diseased portions will be left in the stubble when the grain is reaped. Most of the insects remain unchanged in the stubble until the following year, consequently it is of no use to plough under the stubble, as it has been found in Massachusetts that the insects undergo their transformations when so turned under ground, and easily make their way to the surface when the transformations are completed. The most effectual method then of destroying these insects is to burn the stubble containing them. All the refuse and straw unfit for fodder should likewise be burnt. These precautions should be observed for several successive years, and if carefully performed, will almost be sure to exterminate the *Eurytoma*.

"At the Joint Worm Convention, held at Warrentown, Virginia, in 1854, the following method was recommended:—Prepare well the land intended for wheat, and sow it in the beginning of autumn, with the earliest and most thrifty and hardy varieties, and do nothing to retard the ripening of the crop, by grazing or otherwise. Use guano or some other fertilizer liberally, particularly when seeding corn land or stubble. Burn the stubble on every field of wheat, rye, or oats, and all thickets or other harbors of vegetable growth, contiguous to the crop. Sow the wheat in as large bodies, and in as complete forms as practicable, and if possible, neighbors should arrange amongst themselves to sow adjoining fields in the same year. Feed all the wheat, or other straw, which may be infected, in racks or pens, or on confined spots, and in April set fire to all refuse fragments about the racks, and on or before the first of May carefully burn all the straw which has not been fed. The refuse of wheat, such as screenings, &c., should also be destroyed, as the pupa case is hard, and not easily softened by dampness or wet."*

These directions are worthy of careful attention, as being the remedies proposed by those who have become painfully and practically acquainted with this destructive insect. A free use of manure and thorough tillage, by promoting a vigorous and rapid growth of the plant, is likely to render it less liable to suffer from the attacks of this insect. Large fields, sown with a liberal supply of seed, will probably escape better than those that are smaller and thinner sown, as the insects will

*Harris.

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not be able to penetrate so far when about to lay their eggs. Hence the advantage of neighbors combining where possible, to have their wheat sown in a large block.

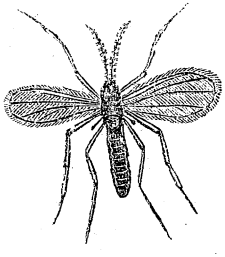
CHAPTER VII.

DIPTERA.

Cecidomyiæ.—Hessian Fly.—Wheat-midge.—History—Devastations—Remedies.

Under this order are classed all insects having only two wings, with two little knobbed threads in the place of hind wings, and a mouth formed for sucking or lapping. The word Diptera signifies *two-winged.* The young insects hatched from the eggs of gnats and flies belonging to this order, are fleshy larvæ, usually of a whitish color, and without legs.

Natural Size.



HESSIAN FLY. Male.—(Mag)

Joints of Antennæ Male.—(Mag)

Ventral view of the terminal segments of the abdomen (Mag.)

The far-famed Hessian fly, and the wheat-midge belong to the family called *Cecidomyiadæ*, or gall gnats. The insects of this family are very numerous, and most of them in the maggot state live in galls or unnatural enlargements of the stems, leaves and buds of plants, caused by the punctures of the winged insects in laying their eggs. The Hessian fly, wheat midge, and some others differ from the majority in not producing such galls. The proboscis of these insects is very short, and does not contain the piercing bristles found in the long proboscis of the biting gnats and musquitos. Their antennæ are long, composed of many little bead-like joints which are more distant in the males than in the other sex, and each joint is surrounded with short hairs. Their eyes are kidney shaped; their legs long and slender; their wings have only two, three, or four veins in them, and are fringed with little hairs round their edges; when not in use their wings are generally carried

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flat on the back. The hind body of the female often ends with a retractile, conical tube, wherewith they deposit their eggs. Their young are little footless maggots, tapering at each end, and generally of a deep yellow or orange color. They live on the juices of plants, and undergo their transformations either in these plants, or in the ground.

The *Hessian fly*. The American entomologist, Say, was the first who satisfactorily determined the species and genus of this insect, under the name of *Cecidomyia destructor*. It obtained its common name from a supposition which seems well founded, that it was brought to this continent in some straw by the Hessian troops under the command of Sir William Howe in the war of the revolution. The statement of Sir Joseph Banks in his report to the British Government in 1789, that "no such insect could be found to exist in Germany or any other part of Europe," is not correct, for this insect, or one like it, had long been known in the vicinity of Geneva; an account of it was given by Duhamel in his "Practical Treatise of Husbandry,"* and in a communication made to the Duke of Dorset, in 1788, by the Royal Society of Agriculture of France. It was not until the autumn of 1833, that this destructive insect, or a species closely allied to it, was observed in Hungary, whether from its previous rarity it had been overlooked, or had not found its way into the American dominions, is not known. Kollar† states that it appears from a report transmitted to the Arch-Duke Charles, that in the beginning of June the ears of wheat were observed to droop and the straws to bend, on his estates at Altenburgh, although the crop was previously in fine condition. In a few days, patches on the poorest soil in different parts became entangled, as if matted together by heavy rains or high winds, which were supposed at first actually to have been the cause. This soon proved to be unfounded, for the mischief gradually spread from the poor to the best lands, until the whole crop was blighted. Two-thirds of the straw at least was laid in less than a week, and the work of devastation was completed by the heavy fall of rain which took place during the latter part of June. The straw thus prostrated produced only small abortive ears; the few grains they contained were shrivelled, and would scarcely ripen, and the straw was of a very bad quality. On examining the roots of those plants which had died off, the soft straw where the larvæ had stationed themselves in families, within the sheath of the leaf, appeared withered, tough

*Page 90, 4to., London, 1759. †Kollar's Treatise.

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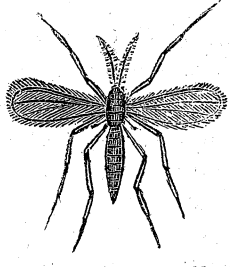
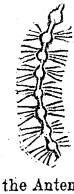
and brown, yet not wounded. At this period the larvæ were transformed into pupa, which were found in clusters inside of each leaf sheath, at the first joint next to the crown of the root, on the estates of the Duke of Saxe Cobourg, at Weikendorf, and in other parts of the neighborhood, whose fields were destroyed. In the year 1834, it was discovered in Minorca, near Toulon, in France, and in the vicinity of Naples. It never seems to have been detected in Great Britain, and was first observed on this continent in the year 1776, in the neighborhood of Sir William Howe's debarkation on Staten Island, and at Flat Bush, on the west end of Long Island. Having multiplied in these places, the insect gradually spread over the southern parts of New York and Connecticut, and continued to proceed inland at the rate of fifteen or twenty miles a year. They reached Saratoga, two hundred miles from their original station, in 1789. They were found west of the Alleghany Mountains in 1797, having apparently advanced about thirty miles every summer. Wheat, rye, barley, and even timothy grass were attacked by them, and so great were their ravages in the larva state, that the cultivation of wheat was abandoned in many places where they had established themselves. In a communication by Mr. J. W. Jeffreys, published in the sixth volume of Buel's "Cultivator," it is stated, that soon after the battle of Guilford, in North Carolina, the wheat crops were destroyed by the Hessian fly in Orange County, through which the British army, composed in part of Hessian soldiers, had previously passed. Harris, to whose valuable work we are indebted for these statements, seems to think that in this instance the chinch bug *(Lygæus leucopterus)* may have been taken for the Hessian fly, and he says it shows how prevalent was the belief respecting the introduction of this fly by the Hessian troops, which opinion he thinks deserving of some credit.*

Natural Size.



HESSIAN FLY. Female.—(Mag.)



Joints of the Antennæ—(Mag.)

*Harris.

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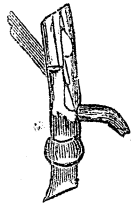
The head, antennæ and thorax, of the Hessian fly, are black, the hind body is tawny, more or less widely marked with black on each wing, and clothed with fine grayish hairs; the body measures about one-tenth of an inch in length. The egg-tube of the female is rose-colored, the wings are blackish, except at the base where they are tawny and very narrow; they are fringed with short hairs, rounded at the tip, and expand one-quarter of an inch or more. After death the hind body contracts and becomes almost entirely black. The legs are pale red or brownish, and the feet black. The antennæ are surrounded with whorls of short hairs, the number of joints vary from fourteen to seventeen, besides the basal point which seem double. The form of the joint differs according to the sex; those of the male being globular, and those of the female, except at the base, oblong-oval.*

Two broods of this insect are brought to maturity in the course of a year, and the flies appear in the spring and autumn, earlier or later, according to the latitude of the place. It has been asserted by some that the flies lay their eggs on the grain in the ear; whether this be true or not it is certain that they do lay their eggs on the young plant long before the grain is ripe, generally speaking as soon as the grain is sprouted, and begins to show a leaf or two, the flies appear in the fields, and having paired, begin to lay their eggs, which occupies them for several weeks. In the eighth volume of the *Cultivator*, there is an



Stem of Autumn wheat with the white colored maggot upon it.

Stem with the maggot in pupa or "flax seed" state.

account by Mr. E. Tilghman, of Queen Ann County, Maryland, of these insects, and the manner in which they deposit their eggs. He says: "By the second week of October the first sown wheat being well up, and having generally put forth its second and third blades, I resorted to my field in a warm afternoon to endeavor to satisfy myself whether the fly did deposit the egg on blades of the growing plant. Selecting a favorable spot, I placed myself in a reclining position in a furrow,

*Harris.

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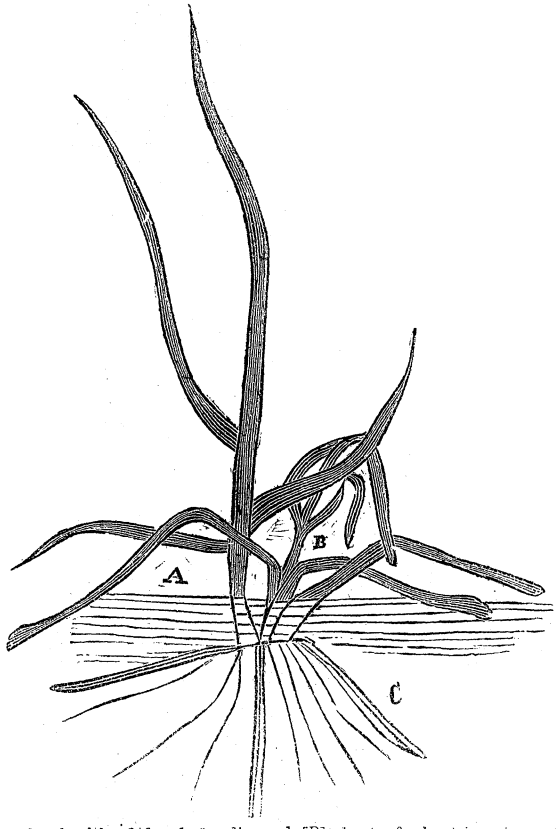
and had been on the watch but a minute or two, before I discovered a number of small black flies alighting and sitting on the wheat plants around me, and presently one settled on the ridged surface of a blade of a plant completely within my reach and distinct observation. She immediately began depositing her eggs in the longitudinal cavity between the little ridges of the blade." Dr. Chapman, who wrote in 1797, says that the Hessian fly lays her eggs in small creases of the young leaves of the wheat. Mr. Havens, who wrote a history of this insect, which is contained in the first volume of the Transactions of the Society for the promotion of Agriculture in New York, says that the fly lays her eggs on the leaves. In the fortieth number of the *Connecticut Farmer's Gazzette*, Mr. Herrick says: "I have repeatedly, both



Appearance of a healthy [A] and of a diseased [B] shoot of wheat in autumn, the worms lying at C.

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in autumn and spring, seen the Hessian fly in the act of depositing eggs on wheat, and have always found that for this purpose she selects the leaves of the young plant. The eggs are laid in various numbers on the upper surface of the strap-shaped portion, or blade, of the leaf." The number on a single leaf, he says, is often twenty or thirty, and sometimes much greater. The egg is about the fiftieth of an inch long, and four thousandths of an inch in diameter, cylindrical, translucent, and of a pale red color. Under favorable circumstances, if the weather prove warm, they will hatch in four days.

"The maggots or larvæ, when they first come out, are of a pale red color. They immediately crawl down the leaf, and work their way between it and the main stalk, passing downwards till they come to a joint, just above which they remain, a little above the surface of the ground, with the head towards the root of the plant. Having thus fixed themselves they become stationary, and never move from the place till their transformations are completed. They do not eat the stalk, neither do they penetrate within it, as some persons have supposed, but they lie lengthwise upon the surface, covered by the lower part of the leaves, and are nourished wholly by the sap, which they appear to take by suction.

Appearance of larvæ of the Hessian fly in the pupa (flax seed) state, on stems of wheat plants from which the leaves have been stripped.

They soon lose their reddish color, turn pale, and become clouded with whitish spots; and through their transparent skins, a greenish stripe may be seen in the middle of their bodies. As they increase in size, and grow plump and firm, they become imbedded in the side of the stem, by the pressure of their bodies on the growing plant. One maggot thus placed seldom destroys the plant, but, when two or three are fixed in this manner around the stem, they weaken and impoverish the plant, and cause it to fall down, or to wither and die. They usually

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come to their full size in five or six weeks, and then measure about three-twentieths of an inch in length. Their skin now gradually hardens, becomes brownish, and soon changes to a bright chestnut color. This change usually happens about the first of December."*

The insect in this form, has been commonly likened to a flax-seed, and this has been called the flax-seed state. While this change of the color and texture of the skin is going on, the body of the insect, gradually becomes detached from the skin, and lies within it a motionless grub. This flax-seed shell has been correctly called a *puparium* or *pupa* case, because the pupa is subsequently matured within it. The process of growth goes on, and, by and by, on opening the leathery skin or puparium, you find the pupa so far advanced that some of the members of the future fly are discernible through the skin which envelops and fetters it on all sides. Towards the end of April, and in the fore part of May, as soon as the weather becomes warm enough, the insects are transformed to flies, making their escape by breaking through one end of their shells."*

"Very soon after the flies come forth in the spring, they are prepared to lay their eggs on the leaves of the wheat sown in the autumn before, and also on the spring sown wheat, which begins, at this time, to appear above the surface of the ground. They continue to come forth and lay their eggs for the space of three weeks, after which they entirely disappear from the fields. The maggots hatched from these eggs pass along the stems of the wheat, nearly to the roots, become station-

VIEW OF DORMANT LARVA TAKEN FROM THE LARVA CASE.

FIG. 1. FIG. 2. FIG. 3. FIG. 4. FIG. 5. FIG. 6.

1. Magnified appearance of the worm when taken out of its larva case. 2. Magnified dorsal view of the worm or active larva. 3. Magnified view of the "flax seed" or larva case. 4. Magnified ventral view of the same. 5. Magnified lateral view of the same. 6. The pupa removed from the pupa case.

ary, and take the flax-seed form in June and July. In this state they are found at the time of harvest, and when the grain is gathered they remain in the stubble in the fields. To this there are some exceptions, for a few of the insects do not pass down so far as to be out of the way of the sickle when the grain is reaped, and consequently will be gathered and carried away witn the straw. Most of them are transformed

*Harris.

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to flies in the autumn, but others remain unchanged in the stubble or straw till the next spring. Hereby, says Mr. Havens, it appears evident that they may be removed from their natural situation in the field, and be kept alive long enough to be carried across the Atlantic, from which circumstance it is possible they might have been imported in straw from a foreign country. In the winged state, these flies, or more properly gnats, are very active, and though very small and apparently feeble, are able to fly a considerable distance in search of fields of young grain. Their principal migrations take place in August and September in the Middle States, where they undergo their final transformations earlier than in New England. They sometimes take the wing in immense swarms, and being probably aided by the wind, are not stopped in their course by mountains or rivers."* On their first appearance in Pennsylvania, they were seen to pass the Delaware like a cloud. Their numbers were so great that in wheat harvest the houses swarmed with them, to the extreme annoyance of the inhabitants. They filled every plate or vessel that was in use, and five hundred were counted in a single glass tumbler, exposed to them a few minutes with a little beer in it.†

Several means have been recommended for lessening or preventing the ravages of the Hessian fly; perhaps the most effectual method will be *to burn the stubble* immediately after harvest, and then ploughing and harrowing the land; as the greater portion of the pupæ, from the the spring laid eggs, remain in the stubble after harvest, it is evident that burning the stubble must get rid of so many of them. It is also recommended to procure seed from uninfected districts, but it is requisite that whole neighborhoods should join in this precaution and persevere in it for two or more years in succession. It has been found in the States, that *luxriant crops more often escape injury than those that are thin and light.* From this we learn the importance of thoroughly working the land and bringing it to a high state of tilth before sowing wheat in it; a liberal use of fertilizing manures, and every thing that can be done in the way of early sowing or any thing that will insure a vigorous and forward state of the crop, will, in a great measure, act as preventatives against the devastations of these destructive insects. Sowing the fields with wood ashes in the proportion of two bushels to an acre, in the autumn, and again in the first and last weeks

* Harris. † Kirby and Spence.

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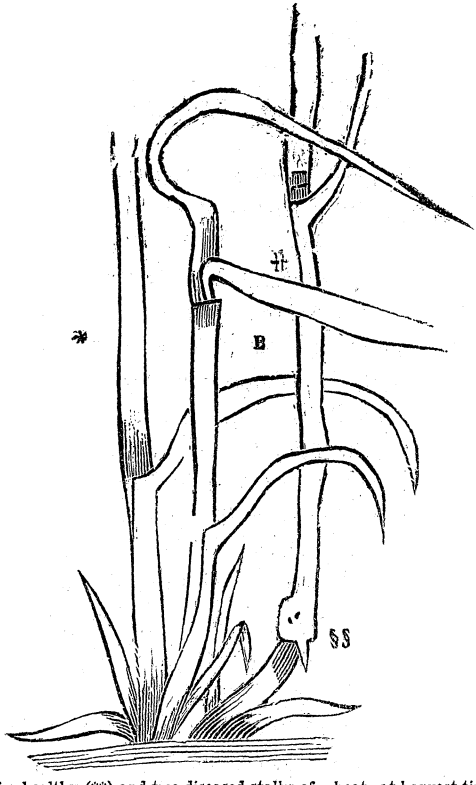
in April, and as late in the month of May as the sower can pass over the wheat without injury to it, has been found useful. Mr. Herrick, a writer in the American Journal of Science, recommends, that the stouter varieties of wheat ought always to be chosen, and the land should be kept in good order. If fall wheat is sown late, some of the eggs will be avoided, but the risk of winter killing the plants will be incurred, added to which they will still be liable to the insects depositing their eggs in the spring. Favorable reports have been made upon



Appearance of a healthy (**) and two diseased stalks of wheat, at harvest time (††) Stalk broken, from being weakened by the worms. (§§) Base of sheath swollen from worms having lain under it, and perforated by parasites coming from these worms —*From Dr. Fitch's Report.*

the practice of allowing sheep to feed off the crop late in the autumn, and it has also been recommended to turn them into the fields again in the spring, in order to retard the growth of the plant till after the fly has disappeared; but this method must be regarded as very hazardous;

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and probably the practice of burning the stubble, procuring seed from uninfected districts, or fumigating infected seed with the gas of burning charcoal in tight vessels, or submitting it to the vapor of *chloroform* in similar vessels, together with judicious management of the soil, will be found the best means of lessening the evils arising from the depredations of this noxious insect.

A benevolent Providence has ordered that the eggs, larvæ, and pupæ of the Hessian fly should be the prey of a host of parasitical insects. A large proportion, probably more than ninth-tenths of every generation of this fly is thus destroyed, according to Mr. Herrick's statement. These parasites are all minute Hymenopterous insects, similar in their habits to the true ichneumon flies. The chief parasite of the pupa is the *carapheon destructor* of Say, a shining black four-winged fly about one-tenth of an inch in length. This has often been taken for the Hessian fly, from being seen in wheat fields in vast numbers, and from its being found to come out of the dried larva-skin of that fly. In the month of June, when the maggot of the Hessian fly has taken the form of a flax seed, the cerapheon pierces it, through the sheath of the leaf, and lays an egg in the minute hole thus made. From this egg is hatched a little maggot, which devours the pupa of the Hessian fly, and then changes to a chrysalis within the shell of the latter, through which it finally eats its way, after being transformed to a fly. This last change takes place both in the autumn and in the following spring. Some of the females of this or of a closely allied species come forth from the shells of the Hessian fly, without wings, or with only very short and imperfect wings, in which form they somewhat resemble minute ants.

Two more parasites, which have not yet been described, also destroy the Hessian fly, while the latter is in the flax-seed or pupa state. The egg parasite of the Hessian fly, Mr. Herrick says, is a species of *platygaster*, which is very abundant in autumn, when it lays its own eggs, four or five together, in a single egg of the Hessian fly. This, it appears, does not prevent the latter from hatching, but the maggot of the Hessian fly is unable to go through its transformations, and dies after taking the flax seed form. Meanwhile its intestine foes are hatched, come to their growth, spin themselves little brownish cocoons within the skin of their victim, and in due time are changed to winged insects, and eat their way out.

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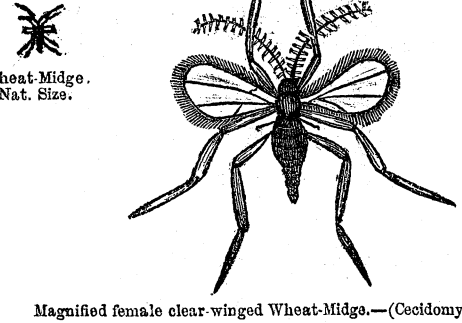
So wonderful are the ways of God! All creation teems with life, and overflows with the glory of the Creator, exhibiting in myriads of instances the most exquisite contrivances for the production of beneficial parasitical animals, and the destruction of noxious ones, each minute insect performing its own proper functions, and showing an exact fitness for the purpose for which it was appointed by the infinite wisdom of Him who created all things and pronounced them good.

The WHEAT-MIDGE, *(Cecidomyia tritici,)* or wheat-fly, as it is commonly called, is nearly allied to the Hessian fly, or *cecidomyia destructor*. Both are destructive to the wheat crop, but differ in their mode



Wheat-Midge. Nat. Size.

Part of a Female Antennæ, Magnified.

Magnified female clear-winged Wheat-Midge.—(Cecidomyia Tritici.)

of operation. The larvæ of the Hessian fly feeds upon the stem of the plant, exhausting its juices and causing it at length to wither and fall. The wheat-fly, *cecidomyia tritici*, lays its eggs in the young ear of wheat just as it blossoms, where the young maggot as soon as it is hatched feeds on the pollen and juices of the ovary of the blossom, thus destroying the reproductiveness of the floret in which it is lodged, so that the seed never forms and the young germ shrivels up and decays.

"The wheat-fly is very minute, scarcely exceeding the twelfth part of an inch in length, and resembling a small gnat or midge. The female is orange colored, her eyes are intensely black, meeting on the crown, and covering nearly the whole head. The antennæ are pale brown, long as the body and clothed with longish hairs; they consist of twelve joints, which, except two at the base, are oblong, oval, and narrowed somewhat in the middle. The abdomen is rather short and tapering to the apex, which is furnished with an ovipositor nearly thrice as long

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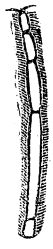
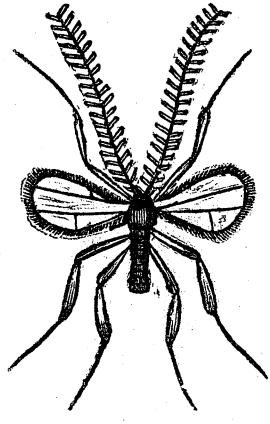
as the body. The wings are incumbent in repose, longer than the body, yellowish white, and beautifully iridescent, or rainbow like, and fringed with delicate hairs. The two halteres, or poisers, are large and capitate. The six legs are long, slender, and nearly of equal length. The thighs and shanks are equally long. The tarsi, or feet, five jointed. The claws are very minute. The male is more rarely seen; they are usually smaller than the females, and somewhat paler in color. The an-



Part of a Male Antennæ.



Foot of Wheat-Midge highly magnified.

Magnified Male of the clear-winged Wheat-Midge.

tennæ of the males are twice as long as the body and consist of twenty-four joints, which, except the two basa ones, are globular. The ovipositor of the female is not seen, and would not by a stranger be supposed to exist in the ordinary condition of the fly; but is readily discovered by pressing the anus, or at the season of oviposition, or laying the eggs."*

The wheat-midge makes its appearance in wheat fields just about the time when the ear is beginning to emerge from its leafy envelope, most commonly in the early part of June. It readily escapes the observation of persons ignorant of its character, or not looking out for it, but to an intelligent observer it may be seen on calm evenings swarming about in small undulating clouds, in the manner of gnats and other kindred species, and it is occasionally seen also in the mornings and during the day. Each female usually chooses as the receptacle of her eggs an ear just emerging from the sheath, and she introduces them by

* Rural Cyclopedia.

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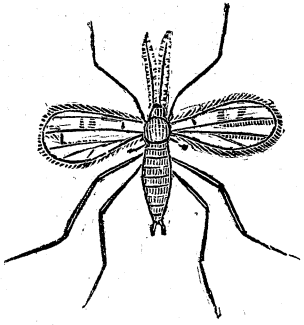
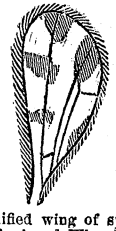
means of her ovipositor into the floret, and while doing so keeps her arms nearly at right angles with the margin of the florets glume, or outer husk. She is so engrossed with her occupation that she is not easily disturbed, and may even go on with her operations though a magnifying glass should be held close to her by an observer; and she slowly introdnces her ovipositor, and slowly parts with her eggs, and then cautiously and deliberately withdraws the instrument. So many

Wheat Midge at rest, with its wings in their natural position—magnified.



Spotted-winged Wheat-Midge [C cerealis] magnified.



Magnified wing of spotted-winged Wheat-Midge.

as thirty-five flies may sometimes be seen at one time upon one ear. Mr. Kirby, after some vain attempts to see the eggs pass through the long retractile tube, eventually witnessed that curious phenomenon. "I gathered," said he, "an ear upon which some of the insects were busy, and held it so as to let a sunbeam fall upon one of them; examining its operations under the three glasses of a pocket microscope, I could then very distinctly perceive the eggs passing, one after another, like minute air-bubbles through the vagina, the aculeus being wholly inserted in the floret." The eggs in passing through the oviduct, receive a coating of glutinous matter, which causes them to adhere firmly to the glumes or outer husk of the floret; and they are deposited in small clusters varying in number from two to upwards of twenty, and they amount in the aggregate to so vast a multitude as might seem to threaten terrible desolation or even utter destruction to wheat crops. The eggs are oblong, transparent, and of a pale buff color, and are hatched in the course of ten or fourteen days. The minute maggots which proceed from them have the same general form as other dipterous larvæ, and are at first transparent and colorless, but soon begin to assume hues of straw color, yellow, saffron and orange, according to

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their age. They then feed upon the young germ, perhaps eating the pollen or fructifying principle of the flower, thus preventing the impregnation of the grain, so that the seed never forms, and the parts of fructification lose all their virus and shrivel and decay. So many as forty-seven have been counted in one floret, and even the smallest number ever present seem to be perfectly competent to do the work of destruction. The flies are not confined to wheat alone, but deposit in barley, rye and oats, when these plants are in flower at the time of their appearance. The maggots have been found within the seed scales of grass, growing near to wheat fields. Being hatched at various times during a period of four or five weeks, they do not all arrive at maturity together. They do not exceed one eighth of an inch in length, and many, even when fully grown, are much smaller. In warm and sheltered situations, and in parts of fields protected from the wind by fences, buildings, trees, or bushes, the insects are said to be much more numerous than in fields upon high ground or other exposed places, where the grain is kept in constant motion by the wind. Grain is commonly more infested by them during the *second* than the first year, *when grown upon the same ground in succession*, and it suffers more in the vicinity of old fields, than in places more remote. They prey on the wheat in the milky state, and cease their ravages when the grain becomes hard. They do not burrow in the kernels but live on the pollen, and soft matter of the grain, which they probably extract from the base of the germs. It appears from various statements, that very early and very late wheat escapes with comparatively little injury; the amount of which, in other cases, depends upon the condition of the grain at the time when the maggots are hatched. When the maggots begin their depredations soon after the blossoming of the grain, they do the greatest injury; for the kernels never fall out at all. When attacked in a more advanced state the grains present a shrivelled appearance. The hulls of the shrunk grain will always be found split open on the convex side so as to expose the embryo.

Towards the end of July and the beginning of August, the full grown maggots leave off eating, and become sluggish and torpid, preparatory to moulting their skins, which takes place in the following manner. The body of the maggot gradually shrinks in length within its skin, and becomes more flattened and less pointed. The torpid state lasts only a few days, after which the insect casts off its skin, leaving

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the latter entire, except a little rent in one end of it. The cast skins are exceedingly thin and colorless, and, through a microscope are seen to be marked with eleven transverse lines. Numbers of the skins may be found in the wheat ears immediately after the moulting process is completed. Sometimes the maggots descend from the plants and moult on the surface of the ground, where they leave their cast skins. Late broods are sometimes harvested with the grain, and carried into the barn, without having moulted.

Kernel of Wheat, the chaff pulled down to show the maggots in their usual situation.

A mature maggot—highly magnified.

After shedding its skin the maggot recovers its activity, writhing about, but taking no food. It is shorter, somewhat flattened, and more obtuse than before, and is of a deep yellow color, with an oblong greenish spot in the middle of the body. Within two or three days after moulting, the maggots either descend of their own accord, or are skaken out of the ears by the wind, and fall to the ground. They do not let themselves down by threads, for they are not able to spin. Nearly all of them disappear before the middle of August, and they are rarely found in the grain at the time of harvest. In an account of the damage done by these insects in Vermont, in the summer of 1833, it is stated, that, after a shower of rain, they have been seen in such countless numbers on the beards of wheat as to give the whole field the color of the insect. Mr. E. Wood, of Winthrop, Maine, makes the following remarks: "This day, 9th August, a warm rain is falling, and a neighbor of mine has brought me a head of wheat which has become loaded with worms. They are crawling out from the husk or chaff of the grain, and were on the beards, and he says he saw great numbers of them on the ground." From this it appears that the descent of the insects is facilitated by falling rain and heavy dews.

Having reached the ground, the maggots soon burrow under the surface, sometimes to the depth of an inch, those of them that have not moulted casting their skins before entering the earth. Here they remain, without further change, through the following winter. In June they are transformed to pupæ. This change is effected without another

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moulting of the skin. The pupa is entirely naked, not being enclosed either in a cocoon or in the preparium formed by the outer skin of the larva, and has its wings and limbs free and unconfined. The pupa state lasts but a short time, a week or two at most, and probably in many cases, only a few days. Under the most favorable circumstances, the pupa works its way to the surface before liberating the included fly; and when the insect has taken wing, its empty pupa skin will be seen sticking out of the ground. In other cases, the fly issues from its preparium in the earth, and comes to the surface with flabby wings, which soon expand and dry, on exposure to the air. This last change occurs mostly during the months of June and July, when great numbers of the flies have been seen apparently coming from the ground, in fields where grain was grown the year before.

The ravages of the wheat midge are not equally great in every place, and are very variable in their character, insignificant one season and excessive in another; but, in the aggregate of years, they are much greater than most farmers are aware of, or would readily believe. Mr. Kirby estimated the loss in a field of fifteen acres which he particularly examined, at one-twentieth of the whole produce; or at an average of about two grains in each year. Mr. Gorrie estimated the loss in the late sown crops in Perthshire, in 1828, at one-third of the whole produce. Mr. Bell, of Mid-Loch, writing in June, 1830, expresses apprehensions respecting the crops of Scotland, fully in accordance with Mr. Gorrie's estimate, and says: "Another year or two of the wheat-fly will make two-thirds of the farmers here bankrupts." Mr. Sidneys says: "The author can assert that in the autumn of 1845, he found great quantities of the larvæ, not only in a first rate wheat district in Norfolk, but in other parts of the country. Ear after ear was examined by him, and the contents shown to farmers who never before had even heard of such things, and who were perfectly astonished when they saw them. Often has he also entered a barn and taken up a handfull of dust from the floor where wheat had been winnowed, turned out the little orange-colored devourers, now in their membraneous cases, one after another, but scarcely ever met with any person who had previously noticed them. If they had been seen they took them for the seeds of some kind of weed.

This insect has been observed for several years in the northern and eastern parts of the United States and in Canada. It has been mista-

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ken for the grain weevil, the Angoumois grain-moth, and the Hessian fly, and its history has been so confounded with that of another insect, also called the grain worm, in some parts of the country, that it is difficult to ascertain the amount of injury done by either of them alone. This grain worm has been already described in this essay, as the larva of a moth called *Noctua cubicularis*, (order Lepidoptera;) these larva are provided with legs, and suspend themselves by a thread of their own spinning; they remain depredating upon the ears of corn until after the time of harvest; and these characteristics will easily enable persons to distinguish them from the writhing maggot of the wheat-midge, destitute of legs and unable to spin a thread. The larvæ of the *Noctua cubicularis* crawl about. The maggot of the wheat midge move in a wriggling manner, and by sudden jerks of the body.

"The wheat-midge, or wheat fly as it has sometimes been called, was first seen in America about the year 1828, in the northern part of Vermont, and on the borders of Lower Canada. From these places its ravages have gradually extended in various directions, from year to year. A considerable portion of Upper Canada, of New York, New Hampshire. and of Massachusetts, have been visited by it, and in 1834, it appeared in Maine, which it has traversed, in an easterly course, at the rate of twenty or thirty miles a year. The country over which it has spread, has continued to suffer more or less from its alarming depredations, the loss by which has been found to vary from about one-tenth part to nearly the whole of the annual crop of wheat; nor has the insect entirely disappeared in any place, till it has been *starved* out by a change of agriculture, or by the substitution of *late sown* spring wheat for other varieties of grain."*

In the report upon the census of the Canadas for 1851, so carefully and correctly compiled by Wm. Hutton, Esq., we learn that "the worst wheat crops in Canada West in the year 1851, were in those counties where the weevil (wheat midge) was most prevalent. It committed the most serious depredations, in very many cases having rendered whole fields of most promising wheat not worth the threshing. This fly, which deposits its larvæ (eggs) in the blossom of the wheat in order to feed upon the milk of the grain as it ripens, was unfortunately in that year most abundant in the counties of Frontenac, Lennox, Addington, Hastings and Prince Edward, and is traveling gradually west at

* Harris.

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the rate of about nine miles every summer, and remains from five to seven years in a locality. The only prevention yet discovered has been to sow early seed on early land, and very early in the Autumn, so that the wheat may blossom before its enemy takes wing, the period for which depends much upon the earliness of the season. So destructive was the fly in 1851, that the fine agricultural county of Lennox produced only six bushels per acre, Hastings about ten, and Prince Edward, Addington and Frontenac about eleven. It had not in that year reached the county of Northumberland, but was very destructive in that county in the following year, 1852."

In this extract we find the popular name "weevil" used in speaking of the wheat-fly or midge; from page eighteen of this essay it will be observed that the true grain weevil is a coleopterous insect, a slender beetle with a long snout, which does not attack growing crops of wheat but confines its depredations to stored grain. The account given of the wheat-fly in the census report is otherwise substantially correct and will be found to agree with that set forth in the pages of this essay.

The wheat-midge is generally believed, in England, to have strong preferences and dislikes in reference to the commonly cultivated wheats, and has been supposed or observed to do prime injury to some, secondary injury to others, and little or no injury to others. One reason why some wheats are little affected by it, may be that they are generally sown at a time, which, conjointly with their habits, occasions their coming into ear at a period when the midge is not in a condition to attack them; and another reason why the same or other varieties enjoy comparative safety, may be that they have too hard an envelop to be readily pierced by the midge's ovipositor. "The species of Woolly-eared, Lammas-red, and Rivet wheat," says Mr. Sherriff, "have been stated in East Lothian to resist the attack of the fly. The two first mentioned kinds come into ear about a week sooner, the last about a week later, than those commonly cultivated, and to these peculiarities owe their occasional escape, earing either before or after the general depositing of eggs takes place. The fly, however, does not always appear in strict conformity with the growth of the wheat plant, and the earing of different species is late or early, compared with the general crop, according to the time at which they are sown. The eggs of the wheat-fly are generally deposited when the ear is escaping from the sheath,—and when delayed beyond this period, the grains either become diminutive,

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or the maggots perish; and, therefore, a species of wheat in some measure impervious to the ovipositor of the fly at this stage of the plant's growth must tend to mitigate the ravages of the fly. There is such a species cultivated in many countries, the name of which is the Polish wheat, *Triticum polonicum*. It is characterized by a large exterior chaff, which closely envelops the cups when the ear is escaping from the sheath, and at this time defends the flower in a great measure from the fly's ovipositor. I have grown the polonicum on a small scale amongst other kinds; and although it did not altogether escape the attack of the fly, it was much less injured than any of those which came into ear at the same time."

As the Polish wheat is very far from being eminent in other good agricultural qualities, the farmer must look for some other kind superior in quality, yet possessing an equally thick chaff. Mr. Gorrie, in the course of comparative experiments during the prevalence of the wheat-midge in 1829, found a wheat belonging to the species *Triticum tingidum*, nearly akin to the Rivet wheats, possessing a tall vigorous stem, yielding a very large produce, though inferior in quality to those of the common winter wheat, to be completely proof against the midge. "I had a fall of it," says he, "growing in the centre of a field of common wheat, which came into ear on the 22d of June, exactly at the same time with the common variety. At that period I visited the field every evening for a week, and although the flies were numerously and busily employed on every ear of the common wheat (the half of which they destroyed), I, and my friends who went frequently with me, could only detect one solitary fly at work on the new variety; and although the ear was marked, no maggots could therein be afterwards discovered." The field of fifteen acres examined by Mr. Kirby was planted partly with common white wheat, and partly with common red; and the result of his examination was that the white wheat was destroyed at the rate of not quite two and a half grains per ear, while the red was injured at the rate of not quite one a half grains per ear.

But all these experiments, it is feared, are more or less deceptive; and the different results may have been owing to the accidental circumstance of one crop being more exactly in the stage of fitness for the insect's use than another, or to the influence of the gregarious habits of the midge, whose swarms usually assemble and remain in the nighborhood of the spot where they first make a settlement; and the farmer

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had better, perhaps, aim at bringing the common varieties of wheat into early development before the time of oviposition of the fly, or delaying the season of blossoming until after the fly has laid its eggs, rather than trust to the reputed anti-fly properties of any variety.

Kirby recommended remedies or preventives directed immediately against the life or operations of the perfect fly as most likely to prove successful. "By a set of experiments first made upon a small scale," says he, "the intelligent farmer may possibly find out some method that will prevent this insect from laying its eggs in the wheat. These should commence as soon as the ear begins to quit the *folium vaginans* or hose; and they ought to be continued until the germen is impregnated, or to use the rural phrase, the wheat is off the blossom. Perhaps fumigations of tobacco or sulpher, if made when the wind is favorable, might render the ear disagreeable to this insect." But either fumigation of any such kind or medical aspirations, or any other applications which might be suggested, in order to be made on a sufficiently extensive scale to produce decided effect, would probably cost as much trouble and expense as the crop would be worth.

Remedies against the matured larvæ or pupæ have been recommended by some. "It is possible," says Mr. Duncan, "that Mr. Gorrie's plan of ploughing the wheat stubbles, and having what is called a skim coulter attached, of such a construction as would cut and lay about an inch of the surface at the bottom of the furrow, would bury many of the pupæ at such a depth as to render their resurrection improbable." This method, however, could not be adopted where the field was laid down with grass and clover seeds; which would also be a reason for not adopting the next remedy proposed, viz:

Burning the Stubble after the crop has been taken off. This, perhaps, as in the case of the joint-worm and Hessian fly, will be found the most effectual method of lessening the numbers of the wheat-midge. When the stubble is short and scanty, the conflagration may be assisted by straw or other inflammable matters; if it is rank the fire will be sufficient to heat the whole surface of the ground, and in all probability will destroy the greater part if not the whole of the pupæ, heat being speedily fatal to them. The farmer can take the precaution of laying down his clover and grass seeds with barley or some other spring crop, and even where clover has been laid down with wheat it

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would be better to sacrifice it, if at the same time the destructive flies can be got rid of.

As a large proportion of the larvæ which live to become pupæ remain attached to the harvested grain till separated from it by the process of threshing, when they pass away with the chaff dust, and are apt to return directly or indirectly to the ground, care must be taken to prevent such a contingency, by carefully separating the chaff dust and burning it. A method of doing this has been suggested by Professor Henslow, which is both simple and efficient. He says, "It occurred to me that if a wire gauze sieve were placed before the winnowing-machine in a sloping position, so as to allow the chaff to fall upon it, and then roll from it, the pupæ would pass through, and might be caught with the dust in a tray placed below the sieve. The plan was tried and found to answer satisfactorily; and doubtless might be made the means, were it generally adopted, of collecting and destroying myriads on myriads of the pupæ of this destructive fly.

"Several cases of the efficacy of fumigation in preventing the depredations of these insects, are recorded in the agricultural papers of the United States.* For this purpose brimstone has been used in the proportion of one pound to every bushel of seed sown. Strips of woollen cloth dipped in melted brimstone, and fastened to sticks in various parts of the field, and particularly on the windward side, are set on fire for several evenings in succession, at the time when the plant is in blossom; the smoke and fumes thus penetrate the standing grain and prove very offensive or destructive to the flies, which are laying their eggs. A thick smoke from heaps of burning weeds, sprinkled with brimstone, around the sides of the field, has also been recommended. The Rev. Henry Colman, Commissioner for the Agricultural Survey of Massachusetts, says that lime or ashes strewn over the grain when in blossom, is a preventive which may be relied on with confidence. For every acre of grain, from one peck to a bushel of newly slacked lime, or of good wood ashes will be required, and this should be scattered over the plants when they are wet with dew or rain. Two or three applications of it have sometimes been found necessary."†

Harris says, that, in those parts of New England where these insects have done great injury, the cultivation of fall wheat has been given up; and this course he believes to be the safest for some years to come.

* Cultivator, Vol. V, page 136. † Harris.

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Spring wheat sown after the 15th or 20th of May, generally escapes the ravages of these destructive insects; but the time of sowing varies with the latitude and elevation of the place, and the forwardness of the season. Late sowing has almost entirely banished the wheat-flies from those parts of Vermont where they first appeared. Fall wheat, if grown, should be sown very early, so that the grain may have become hard before the flies make their appearance.

The wheat-midge is kept powerfully in check by some natural enemies sent in mercy by Heaven as minute benefactors of our race. Particularly three species of ichnumons. One of these, *Encrytus inserens*, is black and shining, and about half the length of the wheat-midge; another, *Eurytoma penetrans*, is black with a brassy lustre, the abdomen glossed with blue, compressed and truncated behind; and the third, and most important, *Platygaster tipulæ*, is a minute black midge-like fly, with the legs and base of the antennæ red—the male quite black and rarely seen—the female of a pitchy color, with a sharp ovipositorial point at her tail, exceedingly abundant and active in all infested fields in the months of July and August. Superficial observers have mistaken the ichneumon for the parent of the larvæ of the wheat-midge, and have condemned it as the origin of the very evils it is destined to diminish. This little platygaster may be readily found on the glumes or chaffy covers of the wheat ears in the months of July and August. It runs rapidly over the ears and seems to know well those which are occupied by the larvæ of the midge. The female ichneumon deposits one egg, and only one, in each of the larvæ of the wheat-midge. When these eggs are hatched, the young maggot which they produce, and which are the catterpillars of the ichneumons, feed upon the fleshy or muscular parts of the caterpillar they are attacking, carefully avoiding the vital parts. At length the caterpillar they have been thus devouring dies, or, as frequently happens, it changes to the state of chrysalis before it is destroyed. The ichneumon caterpillars also pass to the chrysalis state, and either remain within the body of the dead caterpillar, or come out before they assume the fly state. Each species of ichneumon is restricted in its attacks to one, or at most to a few, species of caterpillar; and the females instinctively proportion the number of eggs they deposit in each individual to the relative size of their own offspring and that of the insect on which they are destined to prey.

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CHAPTER VIII.

Conclusion—Farmers can learn to distinguish noxious insects without becoming thorough entomologists—Birds useful in destroying Insects—Insects most destructive in poor crops—Importance of well working land—Fallows—Wheat-fly worst in old settlements—Travel from East to West—Whole neighborhoods should combine in adopting a remedy—particularly the one sometimes adopted of starving out the Wheat-fly.

From the foregoing pages it will be seen that all those insects which have caused so much loss to the farmer by their devastations amongst his principal crop, wheat, are intimately known and their origin and habits familiar to scientific men. Order is Heaven's first law, and the same Almighty power that keeps the planets in their courses, and orders their goings, does not disdain to govern the tiniest insects by the same immutable law. To trace this harmony and evidence of design in the works of the Creator has been the study of the lovers of natural history; and the conviction that there was such a law, assisted them greatly in their investigations. The scientific arrangement of the different orders of insects is so perfect that although it has been computed that there are upwards of 400,000 varieties or species of them, yet a naturalist has but to mention its generic and trivial names, and thus by the aid of two words alone he can speak of any one of them so distinctly that an entomologist in any part of the world knows instantly the very species that is meant. Now, it is not to be supposed that every farmer can become an experienced entomologist; but, it is not too much to expect that he will endeavor to make himself practically acquainted with those destructive insects, whose effects he so often painfully experiences in the devastation of his most valuable crops. Their ravages are of so appalling a nature as sometimes to blast the best founded hopes of the husbandman, and threaten to entail all the horrors of famine upon the land; yet their species are not very numerous, and in the preceding pages the intelligent agriculturist will find the result of the investigations of learned men in Europe and America with regard to the nature and habits of those insects most injurious to the wheat crop. It should be a source of encouragement to the farmer when threatened with their ravages, to reflect that he has not to contend with a minute enemy, whose nature and habits are shrouded in mystery; for not only have these been clearly and distinctly detailed by careful and experienced observers, but the results of their investigations are within his reach, and at the same time are of such a nature

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as easily to be understood. Destructive insects are under the control of a superintending Providence; they have their appointed tasks, and are limited in the performance of them; if a destructive species should for a while preponderate, yet counter checks are provided, and, as has been seen, many of them become the prey not only of birds and quadrupeds, but even of their own race. There is no reason to suppose that any new species are created from time to time; those that are now attracting observation from their remarkable depredations, have either been brought to this country from other lands, or, by the clearing of the forests, being deprived of those shrubs and plants on which they subsisted, are in a manner compelled to resort to cultivated plants for food. The wanton manner in which insect-eating birds are destroyed, deprives man of a most valuable auxiliary in keeping noxious insects within bounds, and, even when not recklessly destroyed, the neglect of providing ornamental shrubs and trees about Canadian dwelling-houses, entails the loss of the valuable services of these feathered destroyers of the insect race, who would otherwise be encouraged to increase and multiply, if the necessary shelter were provided. The naked and desolate appearance of Canadian farms without a single ornamental tree or shrub, has long been a reproach to the country; let it be hoped when farmers find that these plantations are not only ornamental but useful, they will take pains to procure them. In "Anderson's recreations," it is stated, that a cautious observer having found a nest of young jays, five in number, remarked that each of these birds while yet very young consumed at least fifteen full sized grubs in one day; he then goes on to calculate that this one family of jays, including their parents, would consume twenty thousand grubs in the course of three months; if these jays were encouraged to remain or return to the same spot, we can easily conceive what myriads of destructive grubs would be removed by these birds and their descendants in the course of two or three years.

But perhaps the too anxious desire of the farmer to hasten to grow rich, which leads him to over-crop his lands, or prepare it in a hasty and slovenly manner, has proved one of the greatest encouragements to the devastations of noxious insects. It is well known that animals in a sickly state are always more liable to the attacks of vermin, and it is equally true of plants, that the want of a healthy and vigorous growth encourages the attacks of parasitical insects. From what has been

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stated in the previous pages it will be seen that this has proved to be the case both in Europe and America. Baron Kollar mentions that in a report made to the Arch-Duke Charles of Austria on the Hessian fly, its ravages first commenced on patches of the poorest soil, and then gradually proceeded to the plants growing on the best. And in the United States, according to the authority of Harris, it has been found "*that luxuriant crops more often escape injury than those that are thin and light.*"

From this the farmer will see the importance of thoroughly working his land and bringing it to the highest state of tilth. Too often he has been encouraged by the high prices which have lately been given for wheat, to put in that grain after peas or other spring crops; the consequence is that the larvæ of many destructive insects which abound in the stubble of such crops are turned under with a slight furrow in a position most favorable to come forth in summer and destroy the plants of growing wheat, the well known inferior luxuriance of crops so put in proving an encouragement for the attacks of such insects.

A naked fallow will always be found the best preparation for the wheat crop. By it the soil becomes thoroughly pulverized and mellowed, and rendered fit for the reception and growth of the young plants, an opportunity is afforded to rake up all the weeds and roots of plants, which are often full of the eggs of insects, and which can then be burnt. The eggs, larvæ, and burrowing adults of insects are also destroyed by mechanical and chemical action, and partly by exposing them to the attacks of birds. Facility is also afforded for the early and effective sowing of the wheat, which cannot be done when it is sown after a crop raised the same summer on the ground. From the investigations of that eminent chemist Liebig, it has been found that a summer fallow enriches the land by the disintegration of its mineral constituents, the dissolving of its organic remains, and the general results within it of chemical and electric action, so that one-half of the manure which would otherwise be required is sufficient for the luxuriant growth of the crops that follow.

The weeds and rubbish that collect around large stones and stumps of trees, and the briars that are often allowed to gather in fence corners, all prove to be harbors and an encouragement for the resort of destructive insects; it has been found that in the neighborhood of such places crops suffer the most from their devastations. The farmer, then, has

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an additional inducement why he should get rid of such unsightly objects, as he thereby not only improves the appearance and value of his property, but lessens the casualties to which his crops are subjected by the ravages of destructive insects.

The theory that the wheat flies are most destructive on poor and worn out soils, is borne out by the fact, that on this continent they have commenced their ravages in the oldest settlements and from thence have gradually followed the progress of emigration and consequent clearing of the land. In Canada their progress has been from east to west, and the only exception to this rule has been in the State of Maine, where they advanced in an easterly direction, possibly because the western part of the State was first settled, and the flies have only followed their usual instinct, in first commencing their depredations in the old and worn out settlements, and gradually spreading to the later cleared ones. From the Canada Census Report for 1851,* already quoted, we learn that the wheat fly is traveling gradually west at the rate of about nine miles every summer. When we connect with this circumstance the fact, that in Vermont and other places the wheat fly has been *starved out*, by abstaining from sowing Fall Wheat in those parts, and sowing the Spring Wheat so late as to escape the season in which the flies deposit their eggs, it becomes a matter for serious consideration whether it would not be well for the farmers in Canada in the neighborhood of the infested districts, to agree not to sow any fall wheat for two to three years, and thus interpose a belt of country, from two to three or more miles in width, between the infected and non-infected districts. From the great prices which are procured for fat cattle, and the rough grains, it is a question whether the production of them would not be equally remunerative with that of wheat; added to which is the certainty of the fact, that sooner or later the farmers, unless some precautionary measures are taken, will suffer in their turn from the attacks of the fly, and possibly be compelled to adopt an alternative which, had they observed in time, would have averted the plague not only from themselves, but from their neighbors further west.

Whatever measures may be adopted either in the way of prevention or remedy, it will be necessary for whole neighborhoods to combine in observing them, otherwise they will prove of no effect. In the foregoing pages the result of the observations and experience of persons who

* William Hutton, Esq.

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have been practically acquainted with the evils in question, have been set forth for the instruction and information of the Canadian farmer. These remarks have necessarily been very brief, but it is hoped that they will be sufficient to enable the agriculturist to identify the insects most injurious and beneficial to his crops, to become acquainted with their habits, and to point out the best methods of repelling or destroying those which are most detrimental either in the larva, pupa, or perfect state. This information is the more necessary, since the insects which are the most destructive, the Hessian fly, the wheat midge, and the joint worm, are so minute as scarcely to be distinguished by the naked eye, without careful observation, and consequently their presence is apt to be overlooked until their ravages show, too late, where they have been. The study of the natural history of these insects will tend to impress upon those observing them a conviction of the providential superintendence of an Almighty and all wise Creator. The losses which they suffer from the devastations of such minute creatures will teach them a lesson of humility, and impress upon them a sense of dependence upon Him whose servants these insects are, who can at any moment afflict them with these plagues, and who in mercy hath promised to restore to the well-doing "the years that the locust hath eaten, the canker worm and the caterpillar, and the palmer worm, my great army which I sent among you."

DISEASES OF WHEAT.

MILDEW, known in all ages—Various opinions respecting cause of—True origin of—Fungus plant *Puccinia graminis*—Remedies—Clay soils offer greatest resistance to mildew—Moist weather favorable to it—Judicious culture of the soil a good prevention—Early sowing—Clean state of land—Application of salt a good remedy—RUST—caused by a fungus plant—Two varieties *Uredo rubigo* and *Uredo linearis*—Remedies same as those for mildew—thick crops less liable to attack than thin ones—Frequent repetition of wheat crop encourages these diseases—No amount of manuring will justify frequent cropping with wheat—SMUT—Two species—*Uredo segetem*—*Uredo fœtida*—Astonishing fecundity of these fungi—Remedies—Steeping in certain solutions—Lime water—Ley from wood ashes—Brine—Glauber salts—Even crops suffer the least—Importance of thoroughly working the land—Healthy and vigorous crops best resist the attacks of insects and diseases—wheat thinned out by snow drifts liable to smut—reason why—Importance of scientific researches into these diseases—Farmers cannot apply proper remedies until their true nature is discovered.

The principal diseases to which the wheat crop is liable are *mildew*, *rust* and *smut*.

Mildew has been known and dreaded in all ages as one of the

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greatest foes of grain crops, and as one of the mightest instruments employed in the hands of the Almighty when he has seen fit to scourge a land with the horrors of famine. Its devastating nature was well known to the ancient Israelites. When their crops were blasted with mildew, God, by his prophet Amos, reminded them, "I have smitten you with blasting and mildew, when your gardens and your vineyards, and your fig trees, and your olive trees increased, the palmer worm destroyed them"—and again by the phrophet Haggai, "I smote you with blasting and with mildew, and with hail in all the labors of your hands." It was also known to the Greeks. Theophrastus, in his "History of Plants" written about 320 years before Christ, observed that it occurs more frequently to corn than to pulse; the Greeks found by experience that crops growing on high lands were seldom attacked by this disease, but that when situated in hollow places, surrounded by hills, where the winds could not get at them, they were more frequently infected. To the Romans the mildew was known under the name of "rubigo." Pliny, in his "History of Plants," tells us, that the prevailing opinion was that this disease arises from certain dews settling upon the corn and obtaining a burning quality from the intense heat of the sun. He, on the contrary, thought that the disease arose from cold, and that the infection first occurred during the absence of the sun, and always about the new or full moon. Columella says that mildew is induced by hoeing grain crops during wet weather. Horace, in his Odes, speaks of it as the "sterile rubigo," and Virgil alludes to it in his Georgics:

> "Mox et frumentis labor additus, ut mala culmos,
> Esset rubigo," &c.

The Greeks and Romans were conscious of the destruction it would inflict on their crops, and regarded it as an instrument of vengeance directed by a particular deity, to whom they applied the same name as that by which the plague was known. A festival to propitiate this deity, entitled *Rubigalia* was instituted by Numa 704 years before the birth of Christ. Reddish colored bitches were sacrificed because the lesser dog star was then in the heavens, and was considered unpropitious to corn.

In the prophet Joel, where the Almighty promises to the Jews, "I will restore to you the years that the locust hath eaten, the canker worm and the caterpillar, and the palmer worm,"—this passage is rendered in

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the Latin Vulgate, "Et reddam vobis annos, quos comedit locusta, *bruchus*, et *rubigo*, et *eruca*." Now, under the head weevil, it has been pointed out in this essay, that one of the most destructive insects injurious to the farmer is the *Bruchus pisi* or pea weevil, so that the latter part of this passage from the Vulgate may be rendered, the "*weevil*, the *rust* or *mildew*, and the *caterpillar*,"—which singularly enough are the subjects of consideration in the present treatise.

The mildew has long been known in Great Britain as one of the greatest scourges of the farmer. A writer in the 9th volume of the Quarterly Journal of Agriculture treating of it says:—"Of all the other diseases which attack our cultivated plants, not one is so destructive as the mildew. It is the plague of our wheat crops. So constantly present is this destructive disorder, that in the fairest fields of wheat, grown in the richest corn districts of England, and in the most genial years, I never saw a single acre entirely uninfected. Every year the farmer is more or less injured by this disease; for the produce of each acre of wheat is unquestionably reduced annually several bushels. Yet those who suffer most by the loss, the farmers themselves are almost universally ignorant of the fact, and their attention is rarelyarrested by it till a year occurs in which their crop of wheat is nearly annihilated."

Opinions respecting the cause of mildew are various. It is ascribed in the writing of ancient naturalists, in the writings of modern agriculturists, and in the opinions of practical farmers of the present day, to a number of causes, some of them very conflicting and some very absurd. As we have seen before, the Romans in the time of Pliny, ascribed mildew to the settling of certain dews upon the corn, and to its obtaining a caustic quality from the heat of the sun. Pliny himself ascribed it to cold. The French agriculturists of the early part of last century imputed it to dry gloomy weather, about the time of the corn being at the height of its vegetation. M. Duhamel concurs with this opinion, saying: "I have many times observed that when a hot sun has succeeded dry hazy weather, the corn became rusted within a few days after. The distemper is not common in clear and dry hot years; but when spring is wet, the finest fields of wheat run great hazard of being destroyed by the mildew, which generally appears upon the breaking out of the sun in the morning, after close and sultry weather during which there has not been any dew."

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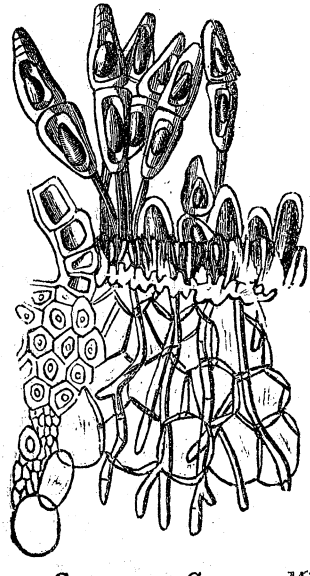
M. Tillet ascribes mildew to a sharpness in the air in dry cloudy weather, which breaks the vascular tissue of the stems and leaves, and makes them discharge a thick oily juice of such a nature as to be changed by heat into a rusty powder.

Other writers of the last century supposed it to be a thick clammy vapor which settled upon the stems of the grain and so stopping the pores as to prevent perspiration, and impeding the circulation of the sap. A modern writer, Mr. R. Somerville, in a communication to the Board of Agriculture, ascribes mildew to the attacks of insects introduced with the manure; these insects however are found to be minute *acari*, which are almost always found upon decaying vegetable matter, and which in the case of mildew is the follower and not the cause of the disease.

The true origin of the Mildew has been found to be due to the regular parasitic growth of the *Puccinia graminis*, a fungous plant, belonging to the hypodermii division of the eutophyti class of coniomycetes. The name *Puccinia* is derived from a Greek word which signifies "closely" or "thickly," and alludes to the crowded manner in which the minute fungi are packed in the tufts and patches in which they grow. When a stem of wheat begins to be mildewed, a number of



PUCCINIA GRAMINIS, (*Common Mildew.*)

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dark colored spots will be seen under the epidermis, some of an orange hue, and others of a dark brown tinge; in a short time the outer cuticle is ruptured, and through the openings are protruded dark clusters of spores, amassed in dense, diffuse tufts, often confluent or running into one another, so as to form long parallel lines, and commonly possessing at first a brownish yellow color, and changing afterwards to black. The spores or seed vessels generally grow immediately beneath the stomata, (or openings of the pores,) of the stems, and after they burst through the epidermis, they appear, under the microscope, like dense masses of pear-shaped bodies, all distinct from one another, exhibiting diversities of form and outline, and each resting on a stalk into which it gradually tapers. Two compartments or chambers exist in every spore, and are filed with sporules, or the puff-like and surpassingly minute rudiments of another race of fungi. So wonderfully small are not only the sporules, but the spores, that in the opinion of Sir Joseph Banks, from 20 to 40 spores may germinate in the hollow beneath any single stoma (or mouth of a pore); while the stoma itself cannot possibly be detected by the naked eye, and requires to be seen through a good microscope.

The ribbed appearance presented by a stem of wheat when seen through a common magnifying glass, is caused by alternate longitudinal partitions of the epidermis or rind, the one set raised and imperforate, and the other set depressed, and furnished throughout their length with one or two rows of stomata or minute orifices, which in dry weather are closed, and in wet weather are open, and which serve the purpose of imbibing moisture according to the wants and condition of the plant. The leaves and glumes or chaffy covers of ears of wheat are provided with similar stomata, which also are to be found on the leaves, stems and branches of all plants, and are the means provided by nature through which plants obtain necessary moisture. Now these stomata, while imbibing moisture, also take in with it the sporules or seeds of the *puccinia germinis*. Each of these fungous plants sheds some hundreds of sporules, lighter and more minute than those of the puff ball; and as even a healthy crop of wheat produces myriads of *puccinia*, while a mildewed crop supplies inconceivably numerous myriads, we can imagine what vast invisible clouds of sporules are wafted by every wind during the sporing period, which lasts from May till October, and how they must become intimately mixed with all the

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dews and moisture which the thirsty plants imbibe. The Rev. Edwin Sidney, in his work entitled "Blights of the Wheat," says: "The rapidity with which mildew sometimes spreads in astonishing. Only let the circumstances be favorable, and millions upon millions of sporules seem ready to enter the stomata, and germinate beneath them. The atmosphere is charged to an inconceivable extent with such invisible organs of reproduction. Fries declares the sporules to be so infinite that they rise like thin smoke into the air by evaporation, and are dispersed in innumerable ways, as for instance, by the attraction of the sun, by insects, by wind, by elasticity, or by adhesion. He asserts that in one individual he calculated, on good grounds, that there were at least ten millions if not more. Thus a stoma can scarcely ever perform the function of inhalation without taking in more or less of these sporules; and it is a happy circumstance that they refuse to grow except in certain places, and under peculiar conditions, for if their vegetation were general the produce of the earth would be almost entirely consumed by them."

When the sporules of puccinia have entered the stomata of wheat, and effected a lodgement beneath the epidermis or rind of the plant, they both prey upon the tissues, and intercept a portion of the sap which ascends from the roots for the forming and nourishing of the grain; hence the grain never comes to perfection, but shrivels up, containing comparatively much bran and little flour, so that wheat which has been mildewed has been found from accurate investigations to lose from 31 to 75 per cent. of flour.

Remedies of Mildew.—From the above account of the nature of mildew we may easily perceive that it would be impossible wholly to exterminate the fungous plants which are the cause of it. But though it cannot be wholly exterminated, yet the power of controlling it remains in the hands of the observant and skillful agriculturist. The conditions of soil and culture, and the healthy or unhealthy state of the wheat plants, upon which the progress of mildew very much depends, may be powerfully modified by the skill and the arts of enlightened husbandy. All soils are subject to mildew, but some yield more readily to it than others. Clay soils offer the greatest resistance to it, in consequence of their tendency to keep up an equable temperature about the plants, and thus save them from frequent vicissitudes of heat and cold. Calcareous and sandy soils, on the contrary, from their opposite ten-

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dency encourage mildew on the crops raised upon them, hence the importance of an abundant mixture of clay among a sandy soil, at once improving its texture and lessening the tendency to mildew.

Moist and "muggy" weather has been found to be most favorable to the spread of mildew, and although the farmer cannot influence the weather, yet by judicious surface draining of all marshy places, and subsoil draining of all wet fields, much might be done to ameliorate the very climate, and remove the cause of those damp unwholesome fogs which may often be seen to hover exclusively over most situations, and which are a fertile cause of the spread of mildew.

The judicious culture of the soil, bringing it into such a state as is most favorable to the health and vigor of the wheat plant, has been found a good preventive. A writer in the Journal of the Royal Agricultural Society of Englan says:—"A general healthy state of the wheat plant without any over luxuriance of vegetation, is most likely to secure a crop against the attacks of the rust and mildew fungi; but whatever tends to render the plant sickly, whether it be excess of heat or cold, drought or wet, sudden changes of temperature, poverty of soil, over manuring, shade, &c., must be considered as a predisposing cause to these diseases." Another author remarks, "wherever the farming is of the best kind, and where the drainage is good, the mildew fungus will not be found in any alarming degree. Just as the clean skin of animals is a defense against nauseous living parasites, so by an analagous method, the soil will be rendered free from the destructive fungi which cause mildew in corn. Improved domestic habits in our peasantry, are well known as tending to check the spread of epidemic diseases, and in the same way a better system of cultivation will avert diseases from our corn fields. Mildew was once more prevalent than it is at present, and doubtless its diminution is in a great measure to be ascribed to a better husbandry."

All varieties of wheat are liable to mildew, but some are more liable than others. The white is generally the earliest affected, and the bearded wheat the latest; the cuticle of the latter being of a firmer texture,* the openings of the stomata offer more resistance to the entrance of the sporules, and when any of these have entered, the harsh skin does not so readily yield to the outbursts of the fungi as they are being developed.

*In consequence of containing more siliceous particles in its composition.

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As a general rule *early sown wheat* is more likely to pass the time of blooming before the crop becomes attacked extensively. Late sown crops are green and full of sap at the very season when the moist chill dews of autumn are most rife, and are therefore more liable to the vigorous attacks of mildew. Excessive manuring, or any combination of circumstances which will tend to make a crop very rank, invites the attack and spread of mildew.

A clean state of the land is a preventive against mildew. *A foul state* is an encouragement. Weeds, especially those which come early to maturity, are all harbors for the mildew fungi, where they feed and multiply preparatory to severe and extensive attacks upon the wheat plant. "Mildew," says the Rev. Edwin Sidney, "will seldom prevail to any extent where the precaution of hoeing the land and keeping the surface clean is observed, but wherever there are many weeds on the land, the straw will be generally found more or less affected by it. The author can say from experience, that he has seldom, if ever, failed to meet with it in unclean lands."

The steeping of seed corn in various mixtures is of no benefit in preventing mildew; it may possibly be a defense against the sporules that are lying in the ground and prevent their absorption by the roots of the plants, but they can offer no resistance to the attacks of the puccinia when the plants are in bloom and are assailed externally.

A solution of common salt has been found beneficial in killing the mildew fungus, and thus acting as a cure for the diease. Hence wheat grown by the sea side has been found to be free from attacks of mildew. Well authenticated instances of the advantages of using salt as a cure for mildew are on record; the remedy has been tried by many and found to be successful. The proportion of salt is one pound to a gallon of water, laid on with a plasterer's brush, the operator walking down one furrow and up another, thus sprinkling both sides of the land. Or the mixture may be applied with a watering-pot; in either case, there must be a second person to replenish the supply to the operator. Two persons will thus sprinkle four acres a day. The *modus operandi* of the salt destroying the puccinia is this: this plant being a fungus, its principal constituent is water; upon salt being applied, the watery particles are immediately absorbed, and thus the mildew plant is destroyed. The action of salt upon mushrooms, in making mushroom catsup, explains this theory.

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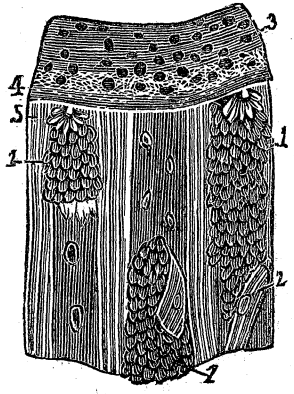
Rust is also a disease of the wheat plant caused by a minute fungus of the coniomycetous order of plants. It is commonly ascribed by botanists to two species of the genus Uredo—*Uredo rubigo*, and *uredo linearis*, which probably are mere varieties of the mildew fungus or *puccinia*. It attacks wheat at all stages of its growth. The fungi have commonly an orange brown or rusty iron color. When the spores are spherical the disease is termed *U. rubigo*; when they are oblong the fungus is called *U. linearis*. The plants when affected seem as if they were dusted with a rusty powder, especially after the sporules have burst through the epidermis or skin of the stem. It is said to prevail more among the rough chaffed wheats than others. The rust is not so injurious as the true mildew, though it causes great havoc when it appears in the later stages of growth of the wheat plant. The predisposing causes are the same as in the case of mildew; it is sometimes readily dissipated by an outburst of sunny weather, especially when attended with a healthy breeze playing over the growing crop. The remedies are the same as those mentioned for mildew. In the case of both mildew and rust, it has been found that thick crops are less liable



SECTION AND PORTION OF A STOCK OF WHEAT AFFECTED WITH RUST.
1, 1, 1, masses of the Rubigo; 2, Stomata, or breathing pores; 3, Cellular tissue; 4, Cuticle; 5, Epidermis.

to their attacks than thin ones, that fields which have received a liberal supply of seed have resisted the disease when thin sown ones have been destroyed. A too frequent repetition of the wheat crop also encourages these diseases. Some farmers think if they only supply plenty of manure, they can go on growing wheat crops without end. This is

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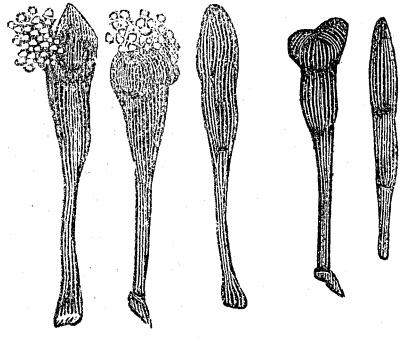
a great mistake, and one into which Canadian farmers at the present time are too apt to be betrayed, in consequence of the high prices offered just now for wheat; the liberal supply of manure with which they hope to renew the vigor of the soil, does but increase the rankness of the straw, thereby encouraging the attacks of these diseases, while the ears of grain, even if they escape disease, are only half filled, yielding after threshing a miserable shrunk sample, instead of bold, plump wheat. The laws of nature are invariable, and cannot be disregarded



Uredo Rubigo, (*Common Rust.*)

with impunity, the productive powers of the soil have a limit, beyond which man, with all his fancied skill, cannot force them; and he who, in his haste to grow rich, endeavors to over-tax those powers, will find that he is only killing the bird which laid him the golden eggs.

Smut is a disease of the ears of growing grain, by which the substance which should form flour, becomes entirely changed into a black powder, similar to a puff ball, or dusty mushroom. It seems to have prevailed in the time of the Roman Empire, and is mentioned by Pliny and Columella. It has been ascribed by all classes of cultivators to a diversity of causes, which for the most part are all erroneous. Jethro Tull ascribed it to moisture; Lord Somerville to insects; Linnæus and Walker ascribed it to the same cause. Sir Humphrey Davy was of opinion that it was produced by a small fungus. Bauer, of Kew, who supplied some interesting articles to the Penny Magazine on the subject, discovered that it was occasioned by a very minute fungus, and from the researches of skillful men, aided by powerful microscopes, it has been ascertained that smut arises entirely from two minute fungi

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of the coniomycetous order.* The *uredo segetum* and the *uredo fœtida.*

These two species of fungi which produce smut, and whose spores constitute the fine, powdery, soot-like substance of the disease, have distinct characteristics, by which they may be easily distinguished from each other.

The *uredo segetum* has no smell, and attacks wheat, barley and oats. It sometimes affects the leaves and stems of the plants, but in general attacks only the ear—this it completely destroys. It first injures the interior parts of the flowers of the plants, so as to destroy their productive powers; it next makes the little stalks of the florets swell and become fleshy; it then consumes this fleshy mass, and at last appears through the chaff, scales or glumes, in the form of a soot-like powder. It generally comes to maturity some time before the crop is ready for the harvest, and the spores, which resemble fine lampblack in appearance, are profusely swept away and scattered by the winds before the grain is cut, so that although it may have committed great devastations, it is seldom seen at the time of harvest. It is comparatively rare in wheat, does not seem to occur at all in rye, is very common in barley, and still more so in oats. The straw of crops affected by this form of smut is said to be very distasteful to cattle, and probably is very unwholesome.

The *uredo fœtida*, or smut ball, occurs only in the grain of wheat, has a disgusting smell, and is a well known and much dreaded disease. It occurs in the young grain at its earliest stage, and when fully developed occupies the whole interior of the grain. Mr. Bauer "discovered it in the ovule of a young plant of wheat, sixteen days before the ear emerged from the hose, and twenty days before the sound ears, springing from the same root, were in bloom." At that early stage the inner cavity of the ovum is very small, and after fecundation, is filled with the albumen or farinaceous substance of the seed, and already occupied by many young fungi, which, from their jelly-like root or spawn, adhere to the membrane which lines the cavity, and from which they can be easily detached in small flakes with that spawn. In that state their very small pedicles may be distinctly seen. At first the fungi are of a pure white color, and when the ear emerges from its hose, the ovum is much enlarged, but still retains its original shape, and the fungi rapidly

* Derived from *konis*, dust, and *muktes*, mushroom.

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multiplying, many of them have then nearly come to maturity, assumed a darker color, and having separated from the spawn, lie loose in the cavity of the ovum. The infected grains continue growing, and the fungi continue to multiply till the sound grains have attained their full size and maturity, when the infected grains are easily distinguished from the sound ones, by their being generally larger and of a darker green color, and if opened appear to be filled to excess with these dark-colored fungi. But the grains infected with the *uredo fœtida* very rarely burst, and these fungi are seldom found on the outside of the grain, but if a grain be bruised, they readily emit their offensive smell, which is worse than that from putrid fish. When the sound grains are perfectly ripe and dry, and assume their light brown color, the infected grains also change, but to a somewhat darker brown, retaining however the same shape that the ovum had at the beginning, the rudiments of the stigma also remaining unaltered.

The sporules of both U. segetum and U. fœtida are surprisingly minute. Not fewer than seven millions eight hundred and forty thousand of the spores of the U. segetum would be required to cover one square inch. A single smut-ball of the U. fœtida contains about four millions of spores; some idea of the reproductive powers of these destructive fungi may hence be formed. They are supposed to find their way into the plants by entering the spongioles of the roots with the moisture, and then ascending with the sap. They are carried into the ground with the infected seed, and are thus readily absorbed by the root during the germination of the seed from which the plant has sprung. If the tained seed be thoroughly cleansed, the plants will not be infected; this has been well ascertained, and hence the practice of washing seed wheat universally prevails.

The chief preventive of smut is the steeping of seed wheat in some solution, which, while it is powerful enough to kill the spores, yet will not destroy the vegetative powers of the grain. The spores which are dispersed at the time of threshing, are of an oily, greasy nature, and cling with considerable tenacity to the grains of wheat. Hence, alkaline solutions, combining with this oily matter and forming soap, are found to be the best washes in which to steep seed wheat. Lime water, ley from wood ashes, and common salt, are all good and much to be preferred to violent poisons, which are very dangerous, and were per-

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haps first applied from the mistaken notion that smut was produced from insects. Fields in the vicinity of the sea are rarely injured, and never extensively, by the ravages of smut; this happens, no doubt, from the prevalence of saline particles. The effect of salt on the mildew fungi has been already noticed, and there is every reason to suppose that it will be found equally effectual in destroying the vitality of the sporules of the U. fœtida. Stale pickle, in which meat has been preserved, will be found very useful as a wash for seed wheat. If the grain be poured into a large tub containing pickle, the unbroken smut-balls will float to the top and may be skimmed off. After the grain is thoroughly saturated it may be placed on a sieve or riddle, and thus the wheat can gradually be drained, when it should be spread upon the barn floor and dried with fresh powdered lime, which may be scattered over it, and thoroughly mingled with the grain by raking it about.

A solution of sulphate of soda (glauber salts) in the proportion of seventeen and three-fourths pounds to twenty-two gallons of water, has been found very efficient; as this salt does not readily dissolve, the solution should be made the day before it is wanted. Mr. Bauer recommends lime water, but perhaps nothing will be found more effectual, cheaper, or more easily procured than a pickle of salt and water.

A field of wheat that presents an even appearance, the stalks all being of equal height, suffers less from smut than an uneven field where some stalks are shorter than others. It will generally be found that the short wheat is all smutty; this may be accounted for in this way. When a field has been thinly sown, or when from winter-killing or other causes the plants have been thinned out, those that are left are induced to stool out, and send up a fresh supply of stalks; these, of course, are later, and not so vigorous, as the parent stems, consequently they are more liable to the attacks of disease, and accordingly are the first to suffer from the smut. Farmers no doubt have often observed that wheat growing near fences which have encouraged large snow-drifts in winter, is always smutty. This is occasioned by the deep snow-drift killing out the wheat, or lying so long on the field after spring has set in, as to impair the vitality of the plants; consequently they become stunted and weak, and as a matter of course the first to be affected by smut.

From this we learn the importance of thoroughly working the land,

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and sowing a liberal supply of seed, in order that the crop may present as even an appearance as possible, and that the plants may be in such a healthy vigorous state as to enable them to resist the attacks of disease. In the older settlements of Canada the land has not that freshness and fertility it once possessed, consequently more seed is required than when the land was first cleared. For the same reason the soil requires more judicious management, and more attention to be paid to the rotation of crops, when wheat will be sown only in due turn, and after a thorough fallowing of the land. Throughout this essay, the bringing the land into a good state of cultivation, avoiding over-cropping it with wheat, and so inducing a healthy and vigorous state of that grain when it is sown, has been pointed out as one of the best means of averting the devastations caused by the insects and diseases injurious to the wheat crop, that form the subject of the present treatise. As a general rule, it will be found that the crops of the industrious, intelligent and observant husbandman, will, in consequence of attending to such directions as above, (directions which are founded on experience, and approve themselves to common sense,) escape these calamitous evils, while those of the lazy, negligent and slovenly farmer are sure to be the first to fall a prey to them.

It may be asked, if the seed is properly cleansed where does the smut come from that attacks the sickly and defective wheat plants? How can the snow-drift that kills out the wheat affect the few plants that remain with smut? The answer to this is, that no doubt the spores of smut fungi which are carried about by the wind, are deposited on the fences, on briars and weeds, and on the stubbles of the crops which have been reaped; in the last case they are ploughed into the ground ready to attack any wheat plants that are predisposed by their sickly state to receive the infection through their roots, or in case of those spores which are lodged on the fences, &c., the unhealthy plants receive them into their system through their stomata, in the same manner as the mildew and rust fungi impregnate the culms or stems of wheat with their spores, which obtain an entrance through the stomata on the surface of the plants.

This theory may be erroneous; but it will deserve a place until a better is substituted. Certain it is, that short and weakly plants of wheat, owing their defective state to the causes already mentioned, are

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the most liable to disease; and it will be well, therefore, even though we cannot account satisfactorily for the origin of the disease, to try and avoid those causes which predispose the plants to receive it.

And here we learn the advantage of those researches of scientific persons who have thoroughly examined and satisfactorily determined the true causes, nature and history of these diseases. So long as their true origin was unknown, it was impossible for the agriculturist to apply the proper remedies; he was contending in the dark with an enemy whose evil effects he experienced, but of whose nature he was thoroughly ignorant, and consequently all his efforts to subdue it were useless, and the remedies he applied inapplicable. But this is no longer the case; learned men have discovered the true origin of these diseases, and the result of their investigations has been gathered in the foregoing pages for the information and benefit of the intelligent farmer; the remedies and preventives mentioned may not be the most effectual, but now that the husbandman knows the nature of those evils which devastate his crops, he can use his own judgment, and bring his practical experience to bear upon the best method which may be employed to counteract their calamitous effects. No amount of human prudence or foresight can altogether prevent their attacks; but, when contending against them, the farmer will now have the satisfaction of knowing that, being acquainted with the origin and nature of the diseases, he has gained more than half the victory over them.

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PRIZE ESSAY

ON

DOMESTIC ECONOMY,

BY MRS. C. W. GREENE.

[To which was awarded the Premium of the Society, by the Executive Committee, at its Meeting in January, 1858.]

Economy means household law—and applies to the government and regulation of the financial concerns of a family. It is commonly used in the sense of frugality, and has reference to the acquisition of wealth.

Wealth consists of anything which is of value in providing for our wants, or administering to our comforts. Three things are essential to its accumulation, viz: knowledge, labor and economy; knowledge, to make an intelligent application of labor—labor, to act as the direct agent in its production—and economy, to make a judicious disposition of it when acquired.

Undoubtedly, most people understand these terms and their application, but it by no means follows that they are practically understood or applied. A failure to accumulate wealth is generally to be attributed to a deficiency in one or more of these essentials. Some possessing the requisite knowledge, do not combine practice with theory; others, through ignorance, make a misapplication of labor; and others still, fail for want of economy.

System is to be observed as the first fundamental law in connection with the present subject. It comprises a regular arrangement of all business affairs connected with the household. As a basis, I shall recommend, first, that an exact *book account* be kept of all items of income and expenditure. Thus it will be easy to ascertain, at the end of a given time, what it costs to live—how much the income exceeds or

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falls short of the expenditure—what expenses can be retrenched—and what sum may be laid aside for future necessities.

The next step is to make a division of labor, appointing a time for all things. Such arrangement, by maintaining order, prevents the frequent recurrence of those collisions in business, which are so common in illy-regulated households, and by causing delays, result in loss of time and money. It also guards against those excesses of action and reaction, that are liable to occur through absence of system, and which generally prove detrimental.

For the benefit of young and inexperienced housekeepers, I will give the outline of an ordinary weekly arrangement, which may be adapted, with modifications, to the circumstances of most families. Regular hours for rising, meals, and retiring, should be observed. For the year, five o'clock is a seasonable hour to rise—six to breakfast—twelve to dine—five for supper in long days, six in short; for retiring—seven or eight for children, according to age—nine for adults. Monday is the most suitable day to wash clothing, and for weekly house-cleaning. Tuesday, baking and miscellaneous cooking, sufficient for a supply until Saturday, should be done. Wednesday, clothing should be ironed and repaired. Thursday and Friday may be occupied, in addition to the ordinary routine, in a choice of pursuits, or as suitable days for social exchanges. Saturday, baking is to be done again, the house set in order for the Sabbath, and the necessary labor of that day, as far as possible, anticipated and performed. Sabbath should be enjoyed as a day of rest. Independently of appropriating the day to mental and moral improvement, in the religious sense, observation of a stated period of relaxation from toil, has a relevancy to the present subject in an economical point of view.

The importance of system in making seasonable provision for the household of such necessaries as breadstuffs, meat, fuel, vegetables, fruit, groceries, &c., must not be overlooked. It would be an improvement on the common custom, if the proprietors of domestic affairs, whose duty it is to furnish the same, would adopt the practice of providing quarterly, or semi-yearly supplies of breadstuffs and groceries, sufficient to meet the family wants for that length of time. It is not economy to furnish in quantities so small that business must be left once or twice during the week to go to mill or grocery. Doubtless there are men who can recollect instances of having their temper tried, by reception

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of intelligence from the cook that flour, sugar, or some other indispensable, was "out," just at some important crisis, when business was most urgent, and time precious, and an extra amount of hired help perhaps, to be necessarily delayed, till, employer, or team, or both, can go to and return from mill or grocery; disappointments often occur, too, which compel a repetition of the journey—altogether, greatly increasing the expense of the article; a word to the wise on this point ought to be sufficient.

Fruit and vegetables are not only luxuries, but cheap and healthful for food, and in every sense economical. Every family should have an abundant and seasonable supply, and to insure this, not only are trees and seeds to be planted, in the appropriate time and manner, but the orchard and garden must *first be well fenced*, and afterward, some labor bestowed in cultivation, till the maturity of the crops—and last, but not least, these should be efficiently secured against the hazards of a severe winter, before the quality is injured by early frosts.

Wood, where wood is used for fuel, ought to be prepared a year before wanted for consumption, that it may be well seasoned, and otherwise in readiness. The economy of this would scarcely seem to require an argument—yet many are in the habit of providing it green, and in very limited quantities—and the unlucky housewife, be her affairs ever so urgent, must patiently, (or impatiently,) await the evaporation of sap at every fresh recruit of fuel. Under these circumstances, the existence of domestic bliss is rather questionable.

The economy of hiring assistance, in-doors or out, depends on situation and circumstances. To avoid incurring needless expense, it is better that as much labor as consistent be performed by members of the family.

Prudence would dictate that a good supply of fruit be prepared after the usual modes of pickling, preserving and drying—and butter, cheese, sugar, &c., be manufactured at home, when it can be done conveniently, and as cheaply. If a majority of the family are females, of competent age, they should spend a portion of time in instructing younger members in the elementary principles of book and household knowledge, do the needlework, keeping accounts, and such other matters as naturally pertain to their sphere of usefulness.

Business ought to be planned with reference to the amount of labor

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requisite to accomplish it, and the probability of being able to command it when needed. People are sometimes induced, through false notions of economy, to attempt too much, without sufficient help to carry out their undertakings, and are thus forced to overtask themselves, frequently at the risk of health and life, or at best, the sacrifice of individual and social happiness. This is wrong, and generally unnecessary—nor is it attended with pecuniary advantage—when too much is undertaken, something is sure to be neglected, and in reaching to secure many important things, others, equally so, are lost sight of.

But there is one point which cannot be too strongly urged, and that is, the propriety of developing the physical ability of young members of a family, and turning it to practical account. Children, at a very early period, should be encouraged, and if necessary, mildly, but firmly compelled to direct their exercises, a portion of the time, in a useful direction. I wish to place particular stress on this point, because it is a common error to repulse their first inexperienced and awkward attempts to render assistance, with harshness and ridicule, which is not only highly injudicious, but absolute cruelty to the sensitive feelings of childhood, and rare indeed must be that disposition which does not become sullen and indolent under such treatment.

A share of labor suited to their capabilities, should be regularly allotted them, from an almost infantile age. It is better to begin too early than too late, as it is less difficult to form industrious habits, at a period when all habits are unconfirmed, than eradicate indolent ones that have been fostered by time.

Among many reasons, which might be assigned, for thus early inducting children into labor, are these: First, they acquire practical skill much easier at this age, and are sooner able to repay in a measure the care bestowed on their earlier years, and assist parents at a time when their services are most needed. Secondly, for their own benefit. With minds and hands occupied, they have less opportunity and inclination to seek injurious amusements and associations; they are also acquiring a knowledge of business which will be of incalculable value to them through life. A young man or woman possessing nothing except this practical ability, though poor in the usual signification, really possesses in that ability, an investment of capital, equal to a sum which produces an interest, equal to the wages they are able to command. To illustrate, take for example the case of a farm laborer, whose wages, in-

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cluding board, may be placed at $200 a year; $200 is the interest of $2,857, at 7 per cent., therefore, a laborer realizes annually the same amount that he would, if actually possessed of this sum at interest, or invested in stock which pays 7 per cent. The illustration differs in the case of female laborers, only as wages differ.

Parents, who have thus judiciously trained their children, have really conferred on them capital of more value than mere property ; the latter is transient, but the former is permanent.

Legitimate financial prosperity of nations, as of individuals, is also based on knowledge, labor and economy ; knowledge may pioneer the path of wealth, and reveal the elementary resources of earth, air and ocean—and labor, patiently toil, to convert them to the benefit of man—but economy, alone, can render these acquisitions valuable.

National prosperity, and its reverses, being but the aggregate of individual, it is a matter of private, as well as public interest, at a time when we are passing through a crisis of pecuniary disaster, to investigate its originating causes. People are apt to hunt down elephants, and lions, vigorously, the while, overlooking the mice, flies and mosquitoes that are committing surer depredations, with less ostentation: in the *domestic customs* of a people, rather than those greater causes, to which more nearly proximate misfortune, are we to find the germinating sources of evils, which sap the vigor of commercial thrift, and lead to embarrassment and ruin.

The too narrow and impractical education of the present generation is one source of the general calamity. The facilities for the acquisition of merely book knowledge, to the exclusion of a more liberal and extended system, and the stimulus which public approbation has afforded the same, over and above its comparative claims, the parental pride, desirous of having professional sons and accomplished daughters—together with the vaulting ambition of "Young America," to reach a position of wealth and distinction by short and easy stages—and the low standard of ability required in the various professions, are among the prominent causes of the unpopularity of productive labor, and the consequent desiccation of those sources of affluence which are its results.

It has become a monomania to hasten children from the cradle into schools—and to crowd their young intellects with the contents of innu-

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merable books, not unfrequently the products of minds but little more practical than their own, while moral and physical training is culpably neglected. Thus, in reality, but half educated, and undisciplined by those necessities which stimulate exertion, and teach them to think for, and rely on themselves, they leave our institutions of learning, men and women in stature, but the merest children in knowledge of the utilitarian principles which move the springs of active life. A majority of this book-fed class thus immured during that important period, when physical vigor should be developed, and habits of usefulness and industry formed, become enfeebled by sedentary life, and acquire a distaste for pursuits, which demand great exertion and sacrifice of personal ease; hence, a large proportion of our young men crowd into professions already overstocked—many more swell the class of mere commercial stock-jobbers—exchangers who produce nothing—vampires consuming the national wealth—who subsist on the industry of others, by awarding too little to the producer, and levying too largely on the consumer; while a more numerous and less respectable class betake them to fraudulent speculations, or the invention and propagation of a great variety of humbugs—thus, flooding the country with ingenious deceptions, thereby destroying public confidence, and establishing roguery as a legitimate business. It would be superfluous to argue that such conditions are highly baneful to a people's welfare, and that a fatal deterioration of national character must be the result.

In the case of females, common sense would dictate that the object of education should be to increase their qualifications for their own appropriate sphere of usefulness, as arbiters, in the several relations they sustain, of the comfort and happiness of home. Yet the popular mode would seem to ignore this, and aim only to confer through the medium of narrow attainments, and so-called accomplishments, an exterior gloss or polish—as venders gild and tinsel their wares, to attract the eye, and render them more marketable—and which, too often, prove to possess, when practically tested, but little more intrinsic value.

House-keeping, by which is meant everything embodied in the domestic system, is the natural avocation of woman, the art of all arts she should thoroughly understand. This knowledge can only be acquired, as in the case of any art, by application of personal labor to the various details which are essential to the comfort and prosperity of every family. General rules and recipes may aid, but cannot supply the place of ex-

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perience; as well might a man unacquainted with navigation, think to guide a ship aright, as for a woman, ignorant of domestic arts and economy, to expect to guide, successfully, the welfare of a household; both are liable, in nautical parlance, to find themselves among the breakers.

It is not the intention to speak disparagingly of that part of education which is designed to develop and elevate the intellect, nor to undervalue those accomplishments which have a tendency to refine and polish, but to show the insufficiency of either, exclusively, to prepare the young for the great necessities of life.

That is the most perfect system which happily combines moral, intellectual and physical culture—not overlooking the fact that man possesses a dual nature—having animal as well as intellectual needs, and that it is of the highest importance that these elements of his nature should be developed and elevated harmoniously; which should take precedence is indicated by the fact that labor was the first great ordinance of Heaven; and that nature's laws compel, first, the supply of the physical wants.

The wisdom of the Creator, perfectly comprehending what conditions were best adapted to the higher progression of the race, permitted those disadvantages which, by making constant demand on the energies of man, and thus keeping in exercise his faculties, should prevent that retrograde into barbarism, which is the inevitable result of inactivity. It is manifestly our duty to assist the designs of Providence in our behalf and to elevate Labor to its own proper dignity, as the guardian virtue of all the virtues. To do this we are not only to give our personal influence, but a reasonable portion of *time* and *money*, to the furtherance of such movements as have for their object the encouragement of any branch of productive industry. Much honor is due our Agricultural Societies for having exerted an extensive and highly beneficial influence in this direction; and for originating a scheme, in the founding of an Agricultural College, which designs to aid in carrying out a thoroughly practical system of education, and from which, under favorable circumstances, we may anticipate the most happy results.

Possessing, as we do, an immense and fertile territory, comprising all earthly climates, and unsurpassed in natural wealth by any portion of the Globe—under free institutions—where plenty may ever be the boon of honest industry—and with the example before us of an ancestry

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whereot we are justly proud, what ought we to expect? What may we not expect if, as individuals, and as members of the body politic, we accomplish the task of reforming those abuses, the disastrous effects of which, from time to time in our national career, have so seriously impeded our progress?

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REPORT

MADE IN THE HOUSE OF REPRESENTATIVES, AT WASHINGTON, BY THE

HON. D. S. WALBRIDGE,

OF KALAMAZOO, MICH.,

REPRESENTATIVE IN CONGRESS FROM THE THIRD DISTRICT OF THIS STATE, ON DONATING LANDS TO ENDOW AGRICULTURAL COLLEGES.

Mr. WALBRIDGE, from the Committee on Public Lands, to whom was referred Bill H. R. No. 2, made the following

MINORITY REPORT.

The undersigned, minority of the Committee on Public Lands, to whom was referred House Bill No. 2, being a bill donating public lands to the several States and Territories, which may provide Colleges for the benefit of Agriculture and the Mechanical Arts, and also to whom was referred the memorial of the State Board of Agriculture of the State of Indiana, asking a grant of land in aid of Agricultural Colleges of the several States, with sundry other memorials and petitions on the same subject, dissenting from the opinion of the majority of the Committee, respectfully submits the following report:

Statesmen and sages of all countries, and of all times, have constantly proclaimed the great truth that the cultivation of the soil is the source and the products of agricultural industry, the foundation stone of all national prosperity; that the earth is the very storehouse from which is drawn the prosperity, wealth, and even the existence of every nation.

If this great storehouse of nature should be closed, and the earth refuse to yield her fruits for one brief year, all animal life must perish and become extinct; and how often do we have occasion to deplore the effects of even a partial failure in agricultural products, and that confined to a limited extent of country? It is, perhaps, more especially true of our own country than of any other, that agricultural industry

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and enterprise is the source and mainspring of national prosperity, and that when that interest languishes, all others feel the deleterious effects.

These truths being universally acknowledged, and as the undersigned believes self-evident, it would seem that this great interest, on which so much depends, should receive the fostering care and attention of all governments, and especially of our own, based as it is upon the principle that "governments are instituted for the benefit of the governed."

The increased and constantly increasing benefits resulting from the intelligent application of science to art in the dissemination of knowledge by means of the printing press, in the increased facilities and speed of traveling since the application of steam as a propelling power, and in the lightning speed with which we hold communication with our friends through the telegraph, all tend to demand of this age more attention and encouragement to this great interest, this very musing mother of all other interests and pursuits.

About one-half of the entire free male population of the United States over fifteen years of age, according to the census of 1850, are directly engaged in the cultivation of the earth, and a large proportion of the balance are indirectly so employed; yet this large part of our population are notoriously less instructed in those branches of scientific knowledge directly connected with the proper and economical management of their own pursuits than any other class of citizens in their peculiar occupations.

The undersigned is unwilling to believe that the cultivators of the soil are, as a class, naturally less intelligent or less able, with the same facilities to acquire knowledge than others, and of necessity must attribute their lack of scientific and practical information to the want of the opportunity of obtaining it.

The establishment of schools and colleges for the instruction of youth in scientific and practical agriculture, although of comparatively recent origin, and as yet but little more than commenced in this country, is not an experiment. Such schools and other institutions of a high grade have been established by most of the European governments, and their utility and importance fully vindicated.

In Russia, the subject of agricultural education is committed to the charge of the minister of public domains, who through his subordinate officers has the supervision of the whole matter. Eight colleges of a high order are established in the empire, possessing 28,220 acres of

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land, an endowment of $37,000 each, and an annual support from the government of $11,250 each. In 1849, they contained an aggregate of 706 students; more than fifty minor schools and model farms are established in various parts of European Russia. In addition to these, are various special schools for instruction in some special branch of agriculture, as flax culture, &c., &c.

The government encourages, by liberal appropriations of the public funds, the Imperial Independent Society of Rural Economy, which is charged with the duty of publishing reports, periodicals, and other works on agricultural subjects. This society also sends agents over the empire and abroad in search of scientific and practical information, to be again disseminated by the society through its publications.

In Prussia, agricultural education is perhaps most thoroughly incorporated with their public administration.

Prussia has five agricultural colleges of a high order, twenty-eight elementary colleges of a lower grade, and fifty-seven special schools for instruction in particular branches of culture. There are seventy-two model and experimental farms in the kingdom. In these schools and colleges are taught the various systems of husbandry, farm management, book-keeping, cultivation of arable and grass lands, horticultural and agricultural technology, mechanics, natural philosophy, botany, mineralogy, a knowledge of soils, agricultural chemistry, veterinary surgery, breeding, raising and management of animals, and in fact every branch of education necessary to the intelligent agriculturist.

These efforts, made by the governments of Russia and Prussia, in behalf of agricultural education, are claimed by those governments, and admitted by all who have witnessed their operations, to be a great success.

In France, in 1848, agriculture was embraced as a system by a general law comprehending the whole empire. Provision was made by that law for the establishment of agricultural schools in each of the departments. A higher order of colleges was established in districts, each containing several departments, and the National Agronomic Institute was established at Versailles. The whole system is subordinated to the appropriate ministry. The number of such colleges and schools in France now exceeds one hundred, and the beneficial results of agricultural knowledge obtained at them is said to be entirely satisfactory.

In all, or nearly all, the German States, more or less encouragement

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is given by the governments to the establishment of agricultural schools, and the general dissemination of scientific and practical knowledge among the people with, it is believed, satisfactory results.

Spain, Portugal and Turkey, it is believed, ignore the subject quite as much as the government of the United States.

Agricultural schools are established in various parts of England and Scotland, but are principally supported by private enterprise and charges for tuition; but in Ireland the government of Great Britain contributes liberally to the support of such schools, and the effect is seen in the increased productions of the island, and the comparative content and improved intelligence of the people.

These efforts on the part of the government of the Old World, to improve and elevate the condition and intelligence of the toiling millions, stimulated by the pervading spirit of the age, have turned the attention of the people of our own country to the subject of a more comprehensive and perfect system of agricultural education, and in a few instances the State legislatures, being nearest to, and first partaking of the popular impulse, have made partial provision for carrying out their wishes.

The State of Michigan has a constitutional provision requiring her legislature to establish an agricultural college, in obedience to which the legislature of that State, in 1855, made an appropriation of fifty-six thousand dollars for that object, with which a tract of land of near seven hundred acres was purchased, and buildings erected. In 1857 the legislature made a further appropriation of forty thousand dollars for the uses of the institution, and in May following the first class of students was received. The college is under the supervision of the State Board of Education, and the faculty consists of a president and five professors. At present there are one hundred students in attendance. The design of the institution is to receive the student direct from the common schools of the State, and give such a thorough English and scientific education as will render him an intelligent citizen, an accomplished farmer, and qualified to discharge any duty his country may require at his hands. Mathematics, agricultural chemistry, the natural sciences, the application of science to the industrial arts, veterinary practice, horticulture, and indeed all such studies as are usually taught in such institutions, and can be embraced in a four years' course, will be pursued. Labor is inseparably associated with study, and

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physical is combined with mental education in the institution, and it is one of its objects to make the cultivation of the soil instructive, varied, interesting and attractive, as well as profitable.

The trial has been successful, and the expectations of its founders, the faculty and students, have been realized as far as so limited a test will allow.

The Farmer's High School of Pennsylvania was incorporated in 1855. The design is similar to that of the Agricultural College of Michigan. It is located near Bellefonte, Centre county.

Its resources consist of $5,000, a legacy of the late Elliot Cresson, $10,000 subscribed by the citizens of Centre county, $10,000 appropriated by the State Agricultural Society. The legislature have appropriated $25,000 absolutely, and $25,000 on condition that further subscriptions to an equal amount shall be obtained. A building is in process of erection which will accommodate three hundred students. The present intention of the trustees is to open the institution within the current year with sixty to seventy students.

The faculty will consist of a president, with four or five professors.

The experimental farm consists of four hundred acres, two hundred of which is the noble gift of one of Pennsylvania's noble sons—Gen. James Irvin, of Centre county—and two hundred sold by him conditionally, the institution being obliged to pay interest only upon the fixed valuation. The whole farm, except about fifty acres, is under cultivation.

The Agricultural College of the State of New York is located at Ovid, between Seneca and Cayuga lakes, and on the banks of the former. The farm consists of 686 acres. The resources of the institution are $40,000, loaned by the State. A college building is in process of erection, which will accommodate 350 students, capable of being enlarged to contain 500. The design, plan, and course of study, will be essentially the same as those of the other institutions named. It will be under the control of a board of trustees.

The People's College of the State of New York was chartered in 1854, and is located at Havana, Schuyler county. It would seem, from the perusal of a pamphlet issued to the public from the institution, that it is the intention of its managers to give instruction in agriculture and the mechanic arts, in connection with a regular literary, or in such one or more branches of knowledge, as the students may prefer.

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Connected with this institution is a farm of two hundred acres, on which the college buildings are being erected, and on which it is contemplated to erect buildings for carrying on various mechanical operations, in which, or on the farm, students may, in their discretion, labor a portion of their time; thus acquiring a practical knowledge of the particular branch of business they propose to follow, while contributing largely, or perhaps wholly, to their own support and tuition while acquiring an education. The institution is to be controlled by a board of directors, with a president and competent number of professors.

In Maryland $50,000 has been subscribed by public spirited individuals for the establishment of an agricultural college. The State has appropriated $6,000 per annum for its perpetual support. Proposals are issued for the purchase of a suitable farm. The institution is to be managed by a board of trustees chosen by the stockholders. The details relative to the management, course of studies, &c., not yet determined upon.

Massachusetts, in 1850, authorized a board of commissioners to report a plan for the establishment of agricultural schools. Professor Hitchcock, one of the commissioners, made an elaborate report relative to agricultural colleges in Europe, and the board recommended a plan to the Legislature, but no further action was ever taken upon the subject.

In Tennessee, Franklin College, near Nashville, was organized in 1854, with the design of making it an agricultural college, uniting culture of the soil with intellectual training. Physical labor was made optional with the student. That feature was finally abandoned, and the institution is now converted into a classical college.

The Union Agricultural Society of Virginia and North Carolina have established an experimental farm near Petersburg, at a cost of $30,000, which is now in operation under a practical overseer. An application to the Legislature of Virginia for the endowment of an agricultural institute in connexion with the farm failed of success.

In Mississippi, a State agricultural bureau has been established by recent enactment.

The State of Ohio has established a State board of agriculture, the object of which seems to be to collect agricultural statistics, but to what extent, or with what especial object, the undersigned is unable to learn.

Connected with a classical institution at College Hill, near Cincin-

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nati, is a scientific department and experimental farm, where are taught various branches of learning directly connected with horticultural and agricultural pursuits.

In Georgia, there is an agricultural professorship connected with the university of that State, with an endowment of $20,000, a donation of one of her public-spirited citizens, where the sciences directly connected with agricultural pursuits are taught in regular courses of lectures, with, as the undersigned is informed, much advantage to the agricultural interests of that State.

Scientific schools and agricultural professorships have been established in connection with very many of the universities and colleges of the country, to in some degree satisfy the irresistible craving and demand of the age for more thorough and practical instruction in the arts and sciences that bear directly upon the industrial occupations of men.

This universal, anxious longing for practical education, for that kind of intelligence which will enable men to apply whatever scientific knowledge they may acquire to some useful, practical and profitable occupation, has finally made its appeal to the Congress of the United States for aid. Such an appeal, coming as it does from all sects and denominations of men, religious and political, from all sections and parts of our broad land, in a word, from the people themselves, can never, in the opinion of the undersigned, be turned from the doors of an American Congress, without at least a respectful hearing and a just consideration.

In view of the great importance of the subject, and the interests involved in it, a brief review of some of the leading occupations and pursuits of the people of this country, the proportion of the population and capital employed, the products of their industry, and the money expended for instruction and protection of various interests and classes of our people may not be out of place in this report.

From the census of 1850, we learn that the entire free male population of the United States, over fifteen years of age, was 5,371,876. Of this number, 2,389,013 are returned as farmers and planters, while in the professions of law, medicine and divinity, 94,515 are employed. To educate these 94,515 men for the *learned* professions, 234 colleges are established, endowed by many millions of dollars, and two millions

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of dollars are actually expended every year in the education of 27,000 students.

The undersigned does not underrate the value of education as acquired in our schools and colleges, nor the value and importance of such institutions to the well-being of society and the country, but submits that while millions are being expended for the literary education of the few, something should be spared for the practical education of the many. If the intelligence of the people is the safeguard of our liberties and attachment to the soil of our birth, the guarantee of our continued independence, surely the more extended the education of the people and the more intelligently that soil is cultivated, the safer are our liberties and the stronger the guarantees of our independence.

The undersigned does not mean to say that the expenditures for the support of the literary institutions of the country are all made by this government; but does mean to say that very many of them have been liberally endowed by this government in the manner asked for by the friends of agricultural education. The census of 1850 shows the valuation of the farms and plantations and farm implements in the United States to be about $3,500,000,000; and the best estimate that the undersigned has been able to make of the agricultural products of the country shows it to exceed $1,500,000,000 annually, while our foreign commerce, exclusive of gold and silver, for the year ending June 30, 1857—all we import and all we export—amounted to but $650,000,000, less than one-half the amount of our agricultural products. To protect, extend and foster this commerce we expend millions annually upon our navy and naval schools, light houses, coast survey, the construction of harbors, &c. It is evident that a small per centage reduction in our agricultural products would materially embarrass our commerce, and not a great reduction would be required to annihilate it, while any addition to our products must of necessity add that sum to our ability to trade with foreign nations. Hence, if commerce is really the only interest to be fostered and cared for by our government, it would seem to the undersigned that we should best accomplish our purpose by stimulating the production of commodities with which to support and carry on our commercial operations, as without something to sell we cannot of course long continue to buy.

The time was when New England produced a surplus of breadstuffs, and but a few short years have passed since New York was the granary

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of the country; while at this time New England produces next to no wheat, and New York not enough for her own consumption. The great wheat growing region of the northwest is now what New England and New York were, and, under our present system, must soon become what New York and New England are. So of the cotton growing States of the southwest. They now supply the deficiencies of the cotton fields of the southern Atlantic States, and must of necessity, ere long, partake of their present barrenness, if the present system of culture is persisted in.

Our country, vast as it is, has its limits, and the time will come when we will have no virgin soils to resort to for our supplies of breadstuffs and cotton.

In view of these facts, prominent as they are, and patent to every one paying the slightest attention to the subject, it would seem that a wise forecast and enlightened statesmanship would endeavor to guard against threatened evils in the future by a wise present legislation. That much may be done by the adoption of a judicious system of measures by the government to restore the fertility of the old States and preserve that of the new, the undersigned does not doubt.

It is not my purpose here to go into a labored argument to show the power of Congress under the Constitution to make the grants proposed in the bill under consideration, but as that question is raised by the majority of the committee, a brief statement of my views in that regard may be permitted.

At the close of the revolutionary war, the whole western wilderness was claimed by a few of the States, but as the war had been conducted and the sovereignty of the country wrested from Great Britain by the common effort and at the common cost of blood and treasure of all the States, it was urged that the unsettled domain ought to become the common property of all. This so evidently just and proper view of the subject was finally acceded to by the claiming States, and each State, though at different times, ceded to the United States all the wild lands claimed by them outside of certain prescribed State limits.

These cessions were made, some of them before and some after the formation of the present Constitution, and it was stipulated in the deeds of cession that the lands should be "a common fund for the use and benefit of all the States."

A very small part of the lands ceded by the States now remain to

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the United States. Very much of the larger part having been sold, or granted to States, Territories, corporations or individuals for various purposes, and on various pretexts, and the great bulk of our present public domain has been purchased of foreign nations and the various Indian tribes since the formation of the Constitution. It is not denied that these latter acquisitions of territory were, like the former, made at the common cost and by the common effort, and are held "for the use and benefit of all the States."

It is not believed that any conditions were attached to the deeds of cession of any of the States to the United States that have not been complied with and carried out in good faith by the government; but if it were otherwise it is difficult to see how any condition contained in a deed of cession by any one State can have any effect upon or control over territory purchased of a foreign nation years after the State cession was made.

Holding this domain, then, as this government does hold it, "for the use and benefit of all the States," what disposition shall we make of it for the benefit of the States. The Constitution says, article 4, section 3, "The Congress shall have power to *dispose of* and make all needful rules and regulations respecting the territory and other property of the United States." How dispose of? Sell for money cash in hand, or on credit, or donate to actual settlers, or grant, to aid in constructing railroads, or making canals, or improving rivers, or build school-houses and support schools, colleges and universities; or shall it be disposed of to reward the *old soldiers* for services rendered their country in any of the wars in which we have been engaged, or shall we give the lands to the States for the purposes of internal improvements generally?

Which one or more of these purposes (for lands have been granted for all of them) is "for the use and benefit of all the States?" Who is to determine?

It may benefit all the States to make a grant of land to aid in the construction of a railroad by increasing the value and promoting the sale of the public land? But does it follow that all the States cannot be benefitted in any other way than by increasing the cash value of their public lands. If so, where is your warrant for giving millions of acres to the soldiers who have heretofore fought your battles? You paid them for their services, and owed them nothing but gratitude. The undersigned does not here question the policy or justice of granting

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these bounty lands. That is not the question under consideration, but one of power to so appropriate property which you hold "for the use and benefit of all the States."

In the opinion of the undersigned, there is no limit to the uses and purposes to which the public domain may be applied but the discretion of Congress. If a proposed grant is for the benefit of all the States, Congress has full power to make it, and the law-making power alone can judge of that fact.

Believing that the grant proposed by the bill under consideration is for the benefit of all the States, the undersigned has no doubt of the power to make it under the Constitution.

The measure under consideration is in no sense a donation to the States. It will relieve them from no taxation, but will impose new burdens and further duties. It merely makes the States trustees for certain purposes, which they may constitutionally and efficiently discharge. The United States will not part with its title to any lands only upon certain conditions, which are to be of perpetual and binding force. As the United States originally acquired their title to much of the public domain upon the stipulation that it was to be disposed of only for the "common benefit" of all the States, so it is believed that no grant has ever been made which will prove to be a more strict compliance with the terms than this now proposed; reaching, as it will reach, not only all the States, but a major part of the people of all the States; reaching them too in their persons and material interests; and reaching them also for the *common benefit* of all the people. That our country needs all the aid likely to flow from a measure of such far-reaching consequences, the united testimony of our agriculturists in all sections of our country loudly proclaims; and that it will prove wise and practical, the experience in our own and other lands, happily, already demonstrates.

Those who are to follow or superintend the cultivation of the soil for a livelihood, know that knowledge on this subject is a power they must win to their support; and those who are merely *amateurs* find the field of instruction broad enough, whether pursued for its usefulness or elegant accomplishment, to satisfy men of the highest order of intellect.

Superior institutions, like those contemplated by this bill, liberally endowed, would impart an education different in kind, but as various and useful as that to be obtained at established literary universities.

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Men with a family of sons, not desiring to crowd professions already full, could educate some, at least, to take charge of the homestead, with a tolerable assurance that it would not at once be dissipated by ignorance and folly, or to engage intelligently in farming with laudable hopes and expectations of ultimate reward.

As tuition, at least, would be free, the enterprising sons of those in indigent circumstances would find admission on equal terms with those having the most affluent fortunes. Happily all our educational, as well as political institutions, are thoroughly imbued with democracy, and we have no troublesome divisions of caste, such as embarrass the progress of free institutions in other lands. In our national schools, and in our local schools, at West Point and elsewhere, it is scholarship and not any title or wealth of family which obtains pre-eminence.

We require these colleges to supply competent teachers throughout the country, to schools of a lower grade, where they are already called for and where few or none are to be found. The greatest difficulty to be apprehended in organizing such institutions is in procuring, at the present moment, professors in America with the requisite qualifications. Such men as Boussingault, Leibig, Agassiz, or even Downing, unfortunately, are not plentiful, and yet State agricultural colleges will require like talent and culture.

Each State will have the sole control in the creation and management of its own proportionate fund, and will therefore adapt it to suit the wishes of the people, climate and soil of its position.

There is no State which may not worthily be entrusted with such an enterprise, and none which will not feel a just pride in contributing, with her sister States, to the common fund of *sound learning* relating to agriculture.

For these and other reasons, the undersigned respectfully recommends the passage of the bill under consideration.

D. S. WALBRIDGE.

I concur in the views above expressed, and I am in favor of reporting the bill with a recommendation that it do pass.

HENRY BENNETT.

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REPORTS

OF

AGRICULTURAL SOCIETIES

OF THE

COUNTIES OF MICHIGAN.

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COUNTY AGRICULTURAL SOCIETIES.

ALLEGAN COUNTY.

No report received from this County for 1857.

BARRY COUNTY.

No report received from this County.

BERRIEN COUNTY.

OFFICE OF BERRIEN CO. AGRICULTURAL SOCIETY,
Niles, August 3d, 1858.

R. F. JOHNSTONE, ESQ., *Sec'y State Agricultural Society, Detroit*:

DEAR SIR—Your circular of 23d ult. is received, and in reply I have to say that very soon after our Annual Agricultural Fair, which was held September, 1857, I made out the statement required of the several County Societies, and sent to the Secretary of State Agricultural Society, at Detroit.

I have no copy of that report, but will give a brief summary.

The Fair of 1857, which was our 7th Annual Fair, was by far the most successful one we have had, both in the number and variety of articles on exhibition, and in the large attendance of people from every part of the County.

The exhibition of Horses was large and fine.

In Cattle, we were not behind many of the older counties; and although it is but a few years since any attention has been given to improved breeds, the show of Devons and Durhams was highly creditable.

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But few Sheep were on exhibition.

Hogs of the Suffolk, Italian and Berkshire breeds were exhibited.

In Carriages, Farming Implements, and in the Mechanical Department, there was a fine show, and much competition.

The same may be said of the products of the Farm, the Orchard and Garden.

Altogether, every one connected with the Society, and every citizen of the County, had good reason to feel a satisfaction and a pride at the success of the Fair, and the marked improvement shown in the Agricultural and Mechanical arts in our County.

The amount paid out in premiums was over $400.

The Society has now purchased a beautiful tract of ground, containing seven acres, adjoining this village, and it is now being fitted up for our future meetings.

Our next (8th) Annual Fair will be held on the 6th and 7th days of October, on our new grounds; and with good weather, we anticipate a large attendance. I am sorry to say we shall have no Fruit to exhibit, as apples and peaches are almost a total failure here this season.

Respectfully yours,

R. W. LANDON,

Secretary.

BRANCH COUNTY.

No report received from Branch County.

CALHOUN COUNTY.

No report received from Calhoun County.

CASS COUNTY.

No report received from Cass County.

CLINTON COUNTY.

No report received from Clinton County.

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EATON COUNTY.

No report received from Eaton County.

GENESEE COUNTY.

Eighth Annual Report of the Genesee County Agricultural Society, 1857.

In presenting, according to annual custom, a report of the action of the Society for the past year, the Executive Committee have once more the pleasure of referring, in terms of warm congratulation, to the support which the Society continues to receive, and the interest manifested in its operations.

The Seventh Annual Meeting was held on the 14th of January, 1857, the then President, GRANT DECKER, Esq., in the Chair.

The Annual Report of the Treasurer, for the year 1856, was audited and adopted, showing a balance on hand of $151 19, after the payment of all premiums awarded.

The Seventh Annual Report of the Executive Committee was also read and adopted by the meeting.

The following officers were then elected for 1857:

President—JONATHAN DAYTON.

Vice Presidents—One in each Township, and one in the City of Flint, viz:

Argentine—Isaac R. Middlesworth;
Atlas—Oliver Palmer;
Burton—C. G. Curtis;
Clayton—Peter Miller;
Davison—Edmond Perry, jr.;
Fenton—S. C. Sadler;
Flint City—Benjamin Pierson;
Flint Township—Horace Bristol;
Flushing—Henry Brotherton;
Forest—Amos Begel;
Gaines—Philander McLain;
Genesee—C. H. Rockwood;
Grand Blanc—Isaac Schram;

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Montrose—John Mackenzie;
Mt. Morris—G. W. Thayer;
Mundy—William Moore;
Richfield—Alanson Munger;
Thetford—Crawford Barkley;
Vienna—Nathan Reed.

Secretary—F. H. Rankin.

Treasurer—M. L. Higgins.

Executive Committee—Benjamin Pierson, Daniel Clarke, Grant Decker, Henry Schram, J. W. King, Benjamin Boomer, C. H. Rockwood.

Auditors—L. G. Buckingham, Warner Lake.

A discussion having arisen at this meeting, in relation to the capacity of the Fair Grounds to accommodate the increasing wants of the Society, the following resolution was offered by Grant Decker, to test the sense of the meeting upon the subject:

"*Rseolved*, That it is the opinion of this meeting that the present Fair Grounds are not large enough to meet the wants of the Society at its Annual Fairs."

This resolution was adopted; whereupon,

D. N. Montague offered the following, which was likewise adopted:

"*Resolved*, That the Executive Committee be and they are hereby empowered to enlarge the present Fair Grounds, by the purchase of adjoining land; or to sell the present Fair Grounds, and purchase suitable land elsewhere, as they may deem best for the interest of the Society."

The Executive Committee took measures, at its first session, on March 26th, to carry out the spirit of these resolves, by appointing Henry Schram, Benjamin Boomer, and Benjamin Pierson, a special committee to examine and report upon the suitability, for the purpose designed, of some land adjoining the Fair Grounds, offered for sale by A. Thayer, Esq.

At this meeting, the Committee also discussed and agreed upon the List of Premiums to be offered.

The Committee adjourned to the eighth of April, to receive the report of the special committee on the purchase of additional land. Meantime several pieces of ground offered for sale to the Society, in

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other localities, were viewed and examined by members of the Executive Committee.

At the meeting held pursuant to adjournment, the special committee reported in favor of buying of Mr. Thayer a piece of land staked out, adjoining the present Fair Grounds, containing (by estimate) between three and four acres, which Mr. Thayer proposed to sell at the rate of $220 per acre—$100 to be paid down, and the remainder of the purchase money in one, two, three, four and five years, by equal annual installments, with interest annually.

The report and recommendations of the special committee were adopted, and the President instructed to have the land surveyed and measured; and Levi Walker and Grant Decker were named as trustees, to whom the land should be conveyed in trust for the Genesee County Agricultural Society.

A deed of conveyance was accordingly executed, and placed on record, and $100 paid to Mr. Thayer; the remainder of the purchase money being secured to him by mortgage.

The Committee again met on the 26th of August, when Lyman G. Buckingham was appointed Marshal of the Eighth Annual Fair, and the usual Viewing Committees chosen; and Nathaniel Ladd was appointed a committee to select ground for the Plowing Match.

Henry Schram, Benjamin Boomer and Grant Decker were appointed a committee to take the requisite measures to fence in the addition to the Fair Grounds, and fit them up for the purposes of the Fair.

The exhibition at the Fair was far ahead of any previous display in this County, and manifested strikingly, in the superiority of the stock upon the Grounds, and its numbers, the benefits which the organization of this Society has produced to the agricultural community. This fact must be quite apparent to all who have regularly attended our exhibitions for some years past, or can compare our present show of farm stock with what it was during the early years of the existence of this Society.

The Executive Committee met on the 15th of October, to review the awards made by the Viewing Committees, and confirmed all the awards made. They were as follows:

FULL-BLOODED DURHAM CATTLE.

Bulls, two years old or over—first premium awarded to E. G. Gale; second to George Robinson; third to C. S. Thompson.

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Yearling Bulls—first premium to John Hamilton; second to C. C. Pierson; third to M. Putnam.

Bull Calves—first premium to C. S. Thompson; second to S. D. Halsey.

Cows, three years old or over—first premium to C. C. Pierson; second to Jonathan Dayton.

Judges—Enos Goodrich, R. A. Carman, Philander Williams.

FULL-BLOODED DEVON CATTLE.

Bulls, two years old or over—first premium awarded to A. B. Pratt.

Judges—Same as on Durham Cattle.

The Committee on Blood Cattle, in submitting their Report, beg leave to state that the show of Cattle on the ground is very fair, and highly creditable to the taste and enterprise of the stock-growers of Genesee County. The specimens of noble animals this day exhibited, may be hailed as a harbinger of that era of improvement in the bovine species, of which our County, in common with its sister Counties throughout the State, has so long stood in need. Much credit is due to the enterprise of a few individuals who have taken their stand as pioneers in the improvement of stock in our County. To these pioneers your committee would say—"go on and prosper"—let perseverance characterize your efforts, and a certain reward awaits you.

In conclusion, the Committee would state that they have observed with regret that numbers of the best herds of the County are not here represented. The Committee would therefore avail themselves of this opportunity of expressing a hope, that hereafter all breeders of blood stock in our County will give the public an opportunity of witnessing the result of their labors. Much interest will be thereby added to our annual exhibition, and the cause of improvement cannot fail to be essentially promoted thereby.

E. GOODRICH,
P. WILLIAMS,
R. A. CARMAN,
Committee.

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Bulls, two years old or over—first premium to Philander Williams.

Yearling Bulls—first premium to Elisha Taylor; second to T. J. Gates.

Bull Calves—first premium to A. Babcock; second to C. C. Pierson.

Milch Cows—first premium to William Eckley; second to S. W. Gibson; third to William Chamberlin.

Two year old Heifers—first premium to A. Babcock; second to J. B. Miller; third to H. D. Frost.

Yearling Heifers—first premium to C. S. Thompson; second to Jonathan Dayton; third to William Rall.

Heifer Calves—first premium to Henry Schram; second to Henry Schram.

Working Oxen—first premium to A. Slocum; second to Wm. H. Brown; third to Philip Beamer.

Three year old Steers—first premium to Henry Schram; second to William Knowles.

Two year old Steers—first premium to Garret Zufelt; second to V. Maxfield.

Yearling Steers—first premium to A. Crapser; second to A. S. Donelson.

Judges—J. C. Phillipson, L. D. Morse, Grovenor Vinton.

The Committee on Native and Grade Cattle make the following report:

The stock on exhibition is very creditable—some very fine grade cattle—and the committee found it very difficult in some cases to decide which should take the first premium, and in consideration of the great amount of labor to be performed in so little time, it may possibly be that slight injustice may have been done. One suggestion the committee beg leave to make, that is that all *native* stock should be classed seperately—as many fine animals of the native stock cannot compete with animals of a high grade.

J. C. PHILLIPSON,
L. D. MORSE,
G. VINTON,
Committee.

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HORSES.

Stallions, four years old or over—first premium to John Hamilton, (Grey Eagle;) second to Walter Cronk.

Three year old Stallions—first premium to Ephraim Elwell; second Corydon Cronk; third to Corydon Cronk.

Two year old Stallion Colts—first premium to A. Crapser; second to A. Crapser; third to John Crumb.

Brood Mares, with Foals—first premium to Truman Schram; second to George Robinson; third to P. A. Skinner.

Matched Horses—first premium to Levi Failing; second to Samuel Aplin; third to A. Crapser.

Geldings, four years old or over—first premium to Isaac Huyck; second to C. P. Avery; third to Benjamin Boomer.

Three year old Geldings—first premium to L. G. Bickford; second to Horace Boomer; third to A. Slocum.

Two year old gelding Colts—first premium to A. Crapser; second to William Tanner.

Mares, four years old or over—first premium to Benjamin Bisbee; second to E. W. Fenner; third to Hiram Bristol.

Three year old Mares—first premium to E. M. Crosby; second to T. Cole; third to Horace Boomer.

Two year old Mare Colts—first premium to N. H. Chittenden; second to A. Crapser.

Yearling Colts—first premium to Reuben Wetherell; second to Thomas Chapin.

Judges—Henry Smith, Nelson Norton, Henry Brotherton.

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SHEEP.

Spanish: full-blooded or high grade.

Fine wool Bucks—first premium to C. H. Rockwood; second to William Chamberlin; third to C. C. Pierson.

Pens of three Ewes—first premium to E. G. Gale; second to C. H. Thompson.

Pens of three Ewe Lambs—first premium to C. H. Rockwood.

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French: full-blooded or high grade.

Fine-wool Bucks—first premium to C. S. Thompson; second to C. S. Thompson; third to Jonathan Dayton.

Pens of three Ewes—first premium to C. S. Thompson.

Leicester.

Bucks—Premium to William Chamberlin.

Ewes—Premium to William Bendle.

Southdown.

Bucks—Second premium to William Eckley.

Judges—D. N. Montague, Thomas Partridge, Dennis Wolverton.

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SWINE.

Boars, one year old or over—first premium to J. Phillipson; second to C. H. Rockwood; third to William Parsons.

Boars, four months old or over—first premium to George Way.

Sow and Pigs—first premium to Samuel Alport.

Judges—A. S. Donelson, William Boomer, Peres Atherton.

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POULTRY.

Brahma Pootra Cock and Hens—first premium to J. Phillipson; second to Lewis Buckingham.

Cochin China Cock and Hens—first premium to Charles Phillips.

Discretionary premium recommended to a Chittagong and Shaghai Cock and two Hens, exhibited by Charles Phillips.

Judges—C. P. Smith, S. F. Low, Lysander Phillips.

The committee on Poultry would respectfully report that the show of Poultry was not such as the importance of this branch of rural progress and importance demands, or the wants of the country call for in the form of "*Fresh Eggs*" and "*Chicken Pie*" at all seasons of the year.

The show was limited to a few coops of fowls, (hens) all of which showed that corn had been high in price and reduced in quantity to less than one "peck."

A portion of the coops were of the different varieties called "Bantams," and in the opinion of the Committee could not be considered

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worthy of the Farmer's attention in raising poultry, either for family use or market, and therefore not entitled to premiums.

For these reasons the committee have awarded premiums only to No. 359, No. 42, and No. 482. And also recommend a discretionary premium to a Chittagong and Shanghia Cock and two Hens, exhibited by Charles Phillips, subject to approval of Executive committee.

Your committee would beg leave to recommend that a more *extensive* list of premiums on poultry be hereafter allowed—embracing the different variety of fowls already in this country. Also premiums on the best and most profitable "Poultry Establishment."

All of which is respectfully submitted.

CHAS. P. SMITH,
S. F. LOW,
LYSANDER PHILLIPS,
Committee.

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FARMING IMPLEMENTS (EXCEPT PLOWS.)

Farm Wagons—first premium to Samuel Aplin; second to Isaac Schram.

Harrow—premium to Lewis Buckingham.

Hand Rakes—premium to Ira Lum.

Stump Puller—premium to Stephen Wolverton.

Committee recommend to favorable notice a Wheat Drill, exhibited by Jonathan Dayton, not in competition, as it was not manufactured in the county.

Judges—William Tanner, Gurdon Watrous, Ira Chase.

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BUTTER AND CHEESE.

Butter—first premium to Mrs. Isaac Schram; second to Frederick Olds; third to C. H. Rockwood; fourth to William Tanner.

Cheese—first premium to Grovenor Vinton; second to Grovenor Vinton; third to Mrs. J. L. Gage; fourth to C. Hyde.

Judges—G. S. Hopkins, Mrs. Ira Chase, Mrs. L. G. Buckingham.

Your committee find fifteen samples of butter, all very fine.

G. S. HOPKINS,
MRS. IRA CHASE,
MRS. L. G. BUCKINGHAM,
Committee.

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DOMESTIC MANUFACTURES.

Woolen Blankets—first premium to Dennis Wolverton.

Flannel—first premium to Jesse Cady.

Woolen Cloth—first premium to Jesse Cady.

Woolen Carpet—first premium to P. Thompson.

Rag Carpet—first premium to Mrs. J. L. Gage; second to R. A. Carman.

The committee recommend discretionary premiums to a piece of rag carpet exhibited by S. D. Halsey; a piece of rag carpet exhibited by C. C. Pierson; a piece of rag carpet exhibited by J. Curtis; a piece of rag carpet exhibited by Richard Bush.

Judges—H. W. Wood, Mrs. A. S. Donelson, Mrs. Isaac Schram.

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HOSIERY.

Woolen Knit Stockings—first premium to Miss Mary Gage; second to Mrs. J. L. Gage.

Cotton Knit Stockings—first premium to Mrs. J. L. Gage.

Linen Knit Stockings—first premium to Miss Mary Gage.

Woolen Socks—first premium to Mrs. Talmon Frost; second to Mrs. Talmon Frost.

Woolen Knit Gloves—first premium to Miss Mary Hiller; second to Mrs. J. L. Gage.

Cotton Knit Gloves—first premium to Mrs. J. L. Gage.

Committee recommend discretionary premiums for best specimen of Knitting Yarn, exhibited by Mrs. J. L. Gage, and second best specimen of same exhibited by J. Curtis.

Judges—C. W. Wisner, Mrs. Asa Wolverton, Mrs. C. H. Rockwood

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ORNAMENTAL NEEDLE WORK.

Ornamental Needle Work—first premium to Miss Ellen Stewart (picture of Bolton Abbey;) second to Mrs. C. S. Payne (picture of Charles I. taking farewell of his family.)

Ottoman Covers—first premium to Miss Emma Wesson; second to Miss C. C. Chamberlin.

Worked Collars—first premium to Mrs. M. A. Salsbury; second to Miss H. M. Dayton.

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Worked Quilts—first premium to Asel Watkins; second to Mrs. H. Butterfield.

White Quilts—first premium to J. W. Begole.

The committee recommend discretionary premiums to the following articles, none of them being named in the advertised list, viz: To a White Merino Scarf, exhibited by Miss S. A. Wright; to an Embroidered Cape, exhibited by Miss S. A. Wright; to a Coverlet, exhibited by H. Ellis; to a Bed Spread, exhibited by H. Ellis; to a Pin Cushion, exhibited by Ann Eliza Payson; to a Bed Spread, exhibited by Asel Watkins; to a Silk Tidy, exhibited by Mrs. Talmon Frost; to a Worked Skirt, exhibited by Miss Minerva Frost; to a Tidy, exhibited by Mrs. Mary Miles; to two Embroidered Skirts, exhibited by Mrs. Mary Miles; to an Embroidered Skirt, exhibited by Emma C. Chamberlin; to two Crochet Collars, exhibited by Emma C. Chamberlin; to a piece of Embroidery, exhibited by Etta Chamberlin (12 years old;) to a Pieced Quilt, exhibited by D. McKercher.

Judges—Washington O'Donoughue, Mrs. A. Carman, Mrs. William Moon.

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WORKS OF ART.

Collection of Artificial Flowers—premium to S. A. Hyde.

Oil Paintings—first premium to E. H. Thomson; second to Miss H. R. Johnson; third to G. A. Brown.

Water Color Paintings—first premium to W. H. Hammersley; second to Miss H. R. Johnson (pastel printing;) third to W. H. Hammersley.

Daguerreotypes—premium to D. S. Frary.

The committee further report as follows:

Oriental Pearl Painting, exhibited by Sarah A. Eldridge, "very fine."

Lot of Ambrotypes exhibited by Brown & Buckingham, "committee would recommend those for premium, considering them very fine specimens of art."

Leather-work Box, exhibited by Mrs. C. S. Payne, "committee recommend this for discretionary premium."

Marble Head-Stone, Grecian Style, exhibited by J. T. Johnson,

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"committee would recommend this as a very fine piece of art, and consider it worthy of a premium."

Cenotaph, French Style, exhibited by J. T. Johnson, "very fine."

Two Cenotaphs, Italian style, exhibited by J. T. Johnson, "committee consider them worthy of consideration."

Specimen of unfinished Sculpture, in Michigan Sand stone, exhibited by J. T. Johnston, "very fine and worthy of a premium."

Box of Shells, exhibited by Mrs. M. L. Higgins, "very beautiful collection."

No. 621—Painting in Water Colors, exhibited by W. H. Hammersley, "very fine, and deserves a premium."

Case of Jewelry and Silver Ware, exhibited by William Stevenson, "a choice and superior collection."

Two specimens of Oriental Painting and Pellace Work, exhibited by Mrs. A. L. Stewart, discretionary premium recommended.

A Chamois Head, in Water Color, exhibited by Miss H. R. Johnson, "no number on this, but the committee would recommend a premium, considering it a very fine piece of art."

Judges—Leonard Wesson, Mrs. F. H. Rankin, Mrs. Enos Goodrich.

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FLOWERS.

Greatest variety and quantity of Flowers—premium to Mrs. C. S. Payne.

Hand Bouquet—premium to Miss Sarah Moon.

Grass Bouquet—premium to Miss Mary S. B. Clarke.

The committee report on No. 593—Bouquet of Flowers, entered by Mrs. J. B. Hamilton—"This was a beautiful Vase of Flowers, not a Bouquet." Oleander, (house plant,) exhibited by Miss Sarah Moon—"Recommend a premium, although this was the only specimen of House Plants exhibited."

Judges—C. K. Williams, Mrs. Leonard Wesson, Mrs. Lysander Phillips.

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FRUIT.

Assortment of Table Apples—first premium to C. H. Rockwood; second to S. J. Bates.

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Single Varieties of Table Apples—premium to S. J. Bates.

Assortment of Winter Apples—first premium to C. H. Rockwood; second to S. D. Halsey; third to Leonard Wesson; fourth to Jonathan Dayton; fifth to Norman Cone; sixth to Samuel Bickley, Jr.

Single Variety of Pears—first premium to John Paton; second to Leonard Wesson.

Assortment of Peaches—first premium to L. D. Morse.

Specimen of Grapes—first premium to Benjamin Pierson; second to Leonard Wesson; third to Mrs. C. S. Payne.

Water Melons—premiums to L. G. Buckingham.

No. 481—Single variety of Table Apples, exhibited by H. Butterfield—"Very fine specimen of Table Apples, name not given."

Judges—Daniel Clarke, D. G. Bort, Jeremiah Slack.

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VEGETABLES.

Celery—first premium to Grant Decker; second to Samuel Bickley, Jr.

Cauliflower—first premium to J. W. King.

Table Turnips—first premium to C. P. Smith; second to Richard Bush.

Beets—first premium to William Eckley; second to A. Curtis.

Parsnips—first premium to John Delbridge.

Carrots—first premium to A. Curtis; second to David Schram.

Onions—first premium to William Eckley; second to Enos Miller.

Cabbage—first premium to T. Partridge, Sen.; second to Samuel Bickley, Jr.

Tomatoes—first premium to Samuel Bickley, Jr.; second to John Delbridge.

Beans—premium to John L. Gage.

Parsley—premium to James Forton.

Winter Squashes—first premium to Horatio Cummings; second to Horatio Cummings; third to William Tanner.

Pumpkin—premium to C. S. Thompson.

Table Potatoes—premium to George Way.

Sweet Potatoes—first premium to Mrs. C. S. Payne; second to R. A. Carman.

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The committee recommend discretionary premiums to No. 203, a Tree of Sweet or Sugar Peppers, exhibited by Leonard Wesson; No. 194, three branches of Shepherd's Crook, exhibited by James Forton; No. 234, three Gourds, exhibited by J. W. King; No. 414, three Crook-necked Squashes, exhibited by A. Hyslop; No. 427, twelve Vegetable Oysters, exhibited by John Delbridge; No. 615, California Marrow Squash, exhibited by J. T. Johnson; No. 315, Bunch of Kohl Rabi, exhibited by J. W. King; No. 442, six purple Kohl Rabi, exhibited by Cassius Henderson.

Judges—James Forton, W. D. Chambers, Lucius King.

"The Viewing Committees are sorry that many choice Vegetables exhibited were not entered or numbered, and could not be acted upon. The Vegetable department was well represented, and does great credit to the horticulture of Genesee County."

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FLOUR.

No flour on exhibition. C. P. Smith exhibited a bag of New Corn Meal made from this year's crop, of the variety known as "King Phillip" Corn. The committee report—"we have examined the above and find it of good quality, and would recommend a discretionary, premium."

Judges—Nelson Gee, Horace Bristol, Goodenough Townsend.

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SAMPLES OF FIELD CROPS.

Winter Wheat—first premium to William Tanner; second to William Tanner.

Spring Wheat—first premium to C. S. Thompson; second to G. Townsend.

Bushel of Corn—first premium to C. H. Rockwood; second to D. L. Lewis.

Twelve Ears Seed Corn—first premium to C. H. Rockwood; second to Alfred Pond.

Oats—first premium to David Schram; second to B. P. Foster.

Peas—first premium to William Tanner.

Barley—first premium to Peter Miller.

Timothy Seed—first premium to J. Slack.

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Judges—J. L. Gage, G. W. Thayer, Clark Boomer.

Committee notice No. 279, twelve ears Seed Corn, exhibited by Peter Miller, as a "good sample of White Flint Corn." Also, No. 332, twelve ears Sweet Corn, exhibited by A. S. Donelson, as "good sample."

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MISCELLANEOUS ARTICLES.

Carriage Harness—premium to Levi Failing.

Wagon Harness—premium to Samuel Aplin.

Churn—premium to H. Collins.

Brick—premium to J. T. Johnson.

Honey—premium to B. P. Foster.

Maple Sugar—premium to C. C. Pierson.

C. C. Pierson's Mode of Making Maple Sugar.

I tap with an inch augur; my spills are made of basswood and pine; I use pine buckets well cleansed before using; I boil in open kettles; gather sap in pine barrels, and use the same for storing sap. My wife does the sugaring off in a large copper boiler; she cleansed the syrup with eggs and milk; after straining through a cloth and stand to settle, cake in tin pans. Stand on the edge in a tub with false heads in it, and let it remain till thoroughly drained. The molasses is handy to use, and the sugar will be very nice and dry when shaved off.

Grand Blanc, Oct. 6, 1857.

Maple Molasses—premium to C. C. Pierson.

Best made Coat—premium to B. J. Lewis.

Buckskin Mittens—premium to David Mather.

Buckskin Gloves—premium to David Mather.

Bookbinding—premium to Thomas Symons.

Judges—E. H. Thompson, Acil Collins, Robert Dullam.

The committee on Miscellaneous Articles would beg leave to make the following report, in addition to that already made, of premiums allowed on articles on exhibition, and which are not set down in the list entitled to premiums:

Besides the premium granted for best sample of Maple Sugar, there are some samples—Nos. 1 and 2 exhibited by John Hiller; No. 320, exhibited by C. F. Gorton; and No. 433, exhibited by D. S. Williams; all of which reflect much credit upon the manufacturers.

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There were some most excellent samples of Syrup manufactured from Chinese Sugar Cane, which, though not named in the advertised list of premiums, are all worthy of notice. One of the samples has been manufactured by Mrs. H. I. Higgins of this city; we have no statement of the process. Another is by Manly Miles, M. D., of Flint, who gives the following statement:

Syrup from the Chinese Sugar Cane—(Sorghum Saccharatum.)

The accompanying specimen of syrup was manufactured from cane raised by Mr. G. J. W. Hill, of this city. From four to five seeds were planted in each hill, the rows were three feet apart, and the hills two feet apart in the rows, whole number of hills twenty-six.

The canes were cut to-day, and after trimming off the tops and leaves, were carefully weighed and passed between two iron rollers for the purpose of expressing the juice.

The juice was then clarified with a table spoonful of limewater, and boiled down, with the following result:

Weight of Canes,..... 198 lbs.
" Juice, ... 100 lbs.
" Syrup,..... 11 11-16 lbs.

One gallon of the Syrup weighed..... 10½ lbs.

The yield at the same rate for an acre would exceed two hundred and sixty gallons of syrup.

M. MILES.

Flint, Oct. 7, 1857.

Hon. Enos Goodrich, of Goodrich, also submitted a sample, with statement as follows:

Sample of Syrup Manufactured from Chinese Sugar Cane.

Yield—About 4½ gallons were produced from a tenth part of an acre. For want of suitable machinery, not over two-thirds of the sap was extracted. The cane being cut before it was fully matured, had not attained its full strength.

E. GOODRICH.

All of these were most excellent, and the committee would recommend honorable notice of them. None of them were entered in the books. There were also good samples entered and exhibited by Wm. Eckley and B. P. Foster.

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Of Buggies, two were on exhibition, and as there was some misunderstanding in regard to the entering of them, the committee did not award any premium; but at the same time would recommend to the notice of the Society, a very tasty and beautiful buggy, [the Executive Committee have directed the premium to be paid to this buggy,] manufactured by the Messrs. Beach, of Linden. Also a Double Buggy, by Keyes & Walton. Likewise a Single Buggy Harness, from the manufactory of Van Slyke & Parsell, reflecting great credit upon the taste and skill of mechanics of Genesee County, but we found no premium offered in the printed list for Buggy Harness; this is well worthy of one. The committee would also recommend a premium to No. 92 a Wagon Harness, exhibited by Ward Gazlay.

A Cross-cut Sawing Machine, exhibited by Daniel McKercher, is also worthy of notice.

There were some samples of Currant Wine on exhibition, which were very fine, more particularly No. 431, exhibited by Mrs. M. L. Thayer.

A very pretty Cast Iron Looking-Glass Frame, exhibited by David Watson, is worthy of a premium; and a dozen Patent Building Blocks, No. 620, exhibited by Eber Adams, are worthy of attention.

All of which is respectfully submitted.

E. H. THOMPSON,
Chairman.

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PLOWS AND PLOWING.

Breaking-up Plows—first premium to Thomas Warren; second to H. D. Wickes.

Plows for single team—first premium to Peter Miller; second to B. H. Green.

Plowing with Horses—first premium to Asa Wolverton; second to Peter Miller; third to Dennis Wolverton; fourth to H. H. Cook.

The committee also recommend a discretionary premium to J. Phillipson.

There was no plowing done with Oxen.

Judges—C. C. Pierson, Mathew Behan, Robert Chambers.

Report of the Judges on Plowing.

This may certify, that we, the Judges, do agree in rendering our de-

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cision, as reported, to those that left their ground in the best condition to receive the seed for a crop without any further labor; and furthermore, we do not consider any ground well plowed without the furrow is well turned, so as to hide all grass or weeds that may hinder the seed from vegetating. Most of the labor that was performed at the plowing match was too much hurried to do good execution; and furthermore, some of the plows were very improperly rigged to make good work; for instance, placing the cutter too near the plow so as to be easily clogged or thrown out of the ground, and setting it to cut as wide or wider than the plow, when in fact it should not cut as wide to do good work in plowing greensward. These are a few of the hindrances of doing good work; and furthermore, it should be properly understood that sufficient time will be given to perform a certain amount of labor on such occasions, without injury to man or beast; which reminds me of one of Benjamin Franklin's old sayings, that "what is hastily done is ill done."

C. C. PIERSON,
Chairman of Com.

The unusual draft upon the funds of the society, occasioned, firstly by the payment of the instalment of the purchase money for the addition to the fair ground, and secondly by the expense of fencing and preparing it for use, left your committee no available funds to be given as discretionary premiums. Accordingly they adopted the following resolution, and caused it to be published:

"*Resolved*, That the executive committee regret, that in consequence of the amount absorbed by the payment, this year, on account of the purchase money for the addition made to the fair grounds, and the expenditure necessarily incurred in fencing and preparing it for the purposes of the late fair, they have not funds available for the payment of any discretionary premiums."

The reports of the viewing committees, recommending such discretionary premiums, were, however, published in full; so that if the meritorious competitors failed to receive the small pecuniary amount of the discretionary premium, they had the more important advantage of a public recognition of the merits of their productions.

There were several entries made of field crops, but the only compet-

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itor who handed in to the secretary a statement of the cultivation and produce of his crop in compliance with the requirements of the rules, was Mr. G. W. Thayer, of Mount Morris. His statement was as follows:

Statement of G. W. Thayer, of one and one quarter acre of Indian Corn, raised in the town of Mount Morris.

The corn was planted on clay soil—ploughed once about the 15th of May, and dragged once. The seed was put in with a corn or bean planter on the 19th of May—a trifle over eight quarts to an acre. Cultivated and hoed between the corn in June. At the time of hoeing thinned out about one-twentieth part of the plants, which still left the corn standing very thick. In July plowed out one furrow in a row—about the 10th of July. This was all the labor expended on the crop up to the time of harvesting.

The yield of corn harvested was 218½ bushels of ears. The corn was the description commonly known as the Red Cob or Kentucky Dent, and when shelled will over run in measurement, common kinds of corn. It also comes early to maturity, and the yield of this patch would have been some bushels more, if it had not been generally used as green corn, before other crops of corn in the neighborhood were sufficiently forward for that purpose.

I certify the foregoing to be a correct statement.

G. W. THAYER.

Dated this 30th day of November, 1857.

The committee on field crops awarded Mr. Thayer the first premium.

The general improvement in the style of plowing throughout the county, and anxiety to procure good patterns, is a subject of general remark; and there is little room to doubt that this awakened interest is in a great measure to be ascribed to the emulation called forth at our plowing matches, and the skill there exhibited. On the whole, the advance in agriculture in this county is fully up with the progress of the times, and a most favorable season has blessed the husbandman with overflowing granaries.

Horticulture being one of the topics upon which the By-Laws of our Society require this committee to report, we regard the culture of Fruit as of sufficient importance to justify us in a few extended remarks.

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After a succession of disastrous seasons, in which the scorching drought of summer conspired with the frost of arctic winters, to the great injury and destruction of trees as well as fruit, we have been favored with a more propitious season; and the fine display of Fruit at aur last Fair was well calculated to strengthen the faith, and renew the hopes, of the fruit grower. The lesson to be treasured from the mortifying experience of the past is, that more care and circumspection should be used for the future; and instead of abandoning the cultivation of any species of Fruit which has heretofore been grown with success, let us render their failure less liable in the future by a selection of those varieties of each which are most hardy, and best adapted to our soil and climate. No fact is better established in horticulture than that varieties even of our most hardy Fruits, as the apple and pear, have a local adaptation, and those which may justly have the highest repute in one locality may prove inferior or worthless in another. Hence the great importance to each individual in setting an orchard, that he make a judicious selection; multiply this by the vast number of orchards which are soon to cover the length and breadth of the land, where but recently the savage and wild beast roamed amid primeval forests, and it gathers an interest not unworthy the attention of the political economist. It may not be amiss, in this connection, to pass in review what has been already done, and suggest where future investigations may be directed with the best promise of profitable results. Premising that a general concert of action, and a cordial response to the pressing invitation so often urged by this Society, for all the fruit growers of our County to come forward and compare their experience, might have given more satisfactory results, which would have more than repaid each for the trouble incurred. We will proceed with such imperfect data as we have been able to gather, in hopes that the importance of such a response may be more forcibly demonstrated by the imperfections of this report.

Commencing with APPLES, as the most important fruit cultivated here, we think the following can be safely recommended, not only as valuable in themselves, but as having been proved to be well adapted to this section, viz:

American Summer Pearmain, (decidedly the best table apple of the season,) Early Harvest and Golden Sweeting, for Summer;

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Fall Pippin, Fameuse or Snow Apple, Porter and Spice Sweeting, for Autumn;

Swaar, R. I. Greening, Hubbardston, Nonsuch, Westfield, Seek-no-further, Esopus Spitzenburg, and Tallman's Sweeting, for Winter.

The following, from their general reputation, and the promise they give, are worthy of further trial, the result of which, it is to be hoped, will be faithfully reported, viz: Early Joe, Summer Queen, Early Strawberry, Maiden's Blush, Sine Qua Non, and Williams' Favorite, for Summer; Late Strawberry, Hawley, Dyer and Gravenstein, for Autumn; Northern Spy, Herefordshire Pearmain, Red Canada, Yellow Belle Fleur, Ladies' Sweeting, Jonathan, Peck's Pleasant, Belmont, Pomme Grise, and Blue Pearmain, for Winter.

We would recommend caution in cultivating the Baldwin Rambo and Newtown Pippin, as there is too much reason for doubt of their success; for, besides being particularly subject to be winter killed, the fruit is liable to black specks, which render them nearly worthless. Further trial may, however, establish a better reputation. Those fine old Russets, the Roxbury and the Golden, should have been included in our list, but that so many worthless varieties have usurped their name as to have destroyed their reputation; and we must advise all fruit growers to eschew everything bearing the name of Russet, without a practical demonstration of their qualities. The Detroit Red or Black Apple, and Black Gilliflower, are sought by those who prefer a dry fruit, but cannot be recommended for general cultivation.

Pears.—It may, perhaps, be premature to give a decisive opinion, but the following have sustained a good reputation with us thus far: Bartlett, White Doyenne or Virgalian, Belle Lucrative, Louise Bonne de Jersey, Flemish Beauty and Gansel's Bergamot. Stevens' Genesee and Oswego Beurre, have proved uncertain, sometimes being "first-rate," at others very inferior.

The following are recommended for trial:

Summer Pears—Dearbon's Seedling, Tyson, Rosteizer and Madelaine;

Autumn Pears—Seckel, Duchesse d'Angouleme, Buffum, St. Ghislain, Brown Beurre, Beurre d'Anjou, Beurre Clairgeon, Beurre Bosc, Beurre Kirtland;

Winter Pears—Winter Nelis, Beurre Diel, Beurre d'Aremberg, Beurre Easter, Lawrence, and Vicar of Winkfield.

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Grapes.—Fine specimens of the following varieties were exhibited at our last Fair: Isabella, Catawba and Clinton. Of these, the Isabella proves too tender for the security of the few past winters, without protection; the Catawba often fails to ripen its fruit; and the Clinton, never of high repute for the table, though hardy, is subject to mildew, which often renders it worthless. It is to be hoped that the Diana, Concord and Rebecca, some one or all of them, will prove better adapted to our climate; if not, we must seek for improved varieties of some of the native species of New England.

Peaches.—We trust the general destruction of our Peach trees by the severe winter of 1855, will not deter our fruit growers from further attempts to cultivate this delicious fruit. That catastrophe was by no means confined to our State, and may not occur again for years. In aid of so laudable an effort, we may recommend the following, on the best authority, as especially worthy of cultivation: Fay's Early Ann, Serrate Early York, Crawford's Early, Crawford's Late, Old Mixon Free-stone, Jaques' Rareripe, Morris' White, and Large Early York.

Plums.—If some practicable preventive can be devised against the ravages of the curculio, we shall hope to enjoy once more an abundance of this desirable fruit. As less liable than most other varieties to the attacks of the curculio, being also of fine quality, as well as hardy and productive, we would recommend the Lombard. The Green Gage is too well known to need any recommendation; but the Reine Claude de Bavay may be mentioned as nearly equal in quality, and very productive. We may enumerate the Jefferson, Washington, Coe's Golden Drop, Blecker's Gage, and Imperial Gage, as varieties of established repute.

Cherries.—It may seem but an aggravation to say anything about Cherries. The utter failure of the Hearts and Bigarreaus, certainly discourages from any extensive efforts for their cultivation. It is to be hoped, however, that some may be disposed to give them a further trial; to such, we strongly recommend the Gov. Wood, as in addition to ranking among the best in quality, and being an early bearer, it is so hardy as to have escaped when all other varieties of the Heart were winter-killed. Dukes and Morellos, hardy and productive, and growing without much difficulty, should receive more general attention. Of Dukes, the May Duke is acknowledged the best; to which may be

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added the Belle Magnifique, as ripening later, and the Belle de Choise, as ranking high in quality, though not productive. Of the Morellos, the Plumstone is the most valuable.

All of which is respectfully submitted.

For the Executive Committee,

F. H. RANKIN,

Secretary.

Flint, December 31, 1857.

ADDRESS

DELIVERED BEFORE THE GENESEE COUNTY AGRICULTURAL SOCIETY, AT ITS EIGHTH ANNUAL FAIR AT FLINT, OCTOBER 8TH, 1857.

BY ALVIN S. HIGGINS, ESQ

Mr. President and Members of the Genesee Agricultural Society:

The embarrassment necessarily incident to the position of one whose years and inexperience present so strong a contrast to your own, is greatly lessened by the consciousness that sincerity of purpose always finds a corresponding sympathy in a farmer's heart.

This day and occasion, and the consciousness of the goodly number assembled here, of themselves, unaided, speak a language and convey a lesson to the minds of all, in comparison with which words seem tame indeed, and the voice but feeble and impotent!

What pen is there so graphic in its power, as to portray the activity and enterprise which moves and animates the great masses of the world, with that fidelity and strength with which the *living* picture invests reality?

The very sound of the woodman's axe embodies in itself a deep significance; and the echo as it rolls away through the broad and tangled wilderness, awakes a new and strange emotion in the dark bosom of the forest gloom. Soon the well turned furrow and the waving grain are smiling in the sunlight of a summer sky! And then the lowing of the herds, the hum of active industry, the prattle of the school-boy, and the low and earnest supplication in the country church, fill up the picture of the farmer's home.

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"Well," said the savage, in his wild, untutored wonder, "when I look upon the white man, and upon his works, I think him almost a God!"

We find ourselves surrounded on every hand by scenes like this, and every farmer here to-day, constitutes but an individual unit in the great aggregate of our country's wealth and enterprise. We look upon the fact—the reality—the result. It cannot, then, be inappropriate upon an occasion like the present, to give our thoughts a retrospective range, and seek to comprehend the cause.

There is, perhaps, no one feature of our national character more strongly marked and more universally acknowledged, than our intense and still increasing *practicality*. And of this we may indeed be proud, if taken in its higher, nobler sense; yet there *is* an acceptation of the term which degrades humanity, by shutting out that sublimer nature which alone assimilates the creature to his God.

How often is the scientific, thinking mind, assailed by epithets of ridicule, and sometimes even of contempt, for daring to maintain a theory, new perhaps, and strange, yet founded on the most unyielding scientific laws. Lilliputian wits wax wittier still upon the expectations of these dreaming schoolmen, and the fact adoring "Gradgrinds" in our midst, evince the most supreme contempt for such dwellers in a world of theory.

Can mathematical formula, say they, change the current of our our trade-winds, or increase the facilities of our commerce? Can painting, or sculpture, or poetry affect our manufactures or enlighten our politics? Let us rather, have something *practical*, something tangible, something real; calculating the limits of their mental horoscope by their balance-sheets of loss and gain! The trite old couplet, though perhaps inelegant to a classic taste, has the charm of truthfulness for them:

> "Dimes and dollars, dollars and dimes,
> An empty pocket 's the worst of crimes."

When Robert Fulton ascended the Hudson in the old Claremont—the first steamboat that ever plowed her waters—he awoke an echo in her neighboring forests, which, increasing with its progress as it rolled away, announced to the world, America has sent you a faithful servant, whose iron sinews are never weary, and whose strength can outride the fiercest storm. And when the mighty thought was first conceived, of calling down the lightnings from their airy home, and making them

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our post boys, again the winged messenger went forth, and brought in close communion distant empires beyond the sea.

And now that the *result* is before the world so distinctly that "he who runs may read;" when steam is made the vehicle by means of which to transport the products of the great North West to the markets of the East, and when electricity is bearing to our very doors, intelligence from all commercial marts abroad, he who first ridiculed the *experiment*, is soonest captivated by the *result*.

I have chosen these familiar illustrations with a view to their application here, since philosophy in all its parts, is consistent and unvarying.

It is not uncommon in these days, for men to express contempt for the scientific mode of tilling soil, and rendering it available. Yet in the daily avocations of their lives, they are constantly employed in the application of the results of the very labor which they so despise.

Why is it that depth of furrow is regulated by the character of grain, and the soil in which it is to be deposited? Why in this field do you drive the strong old plow to its very beam, while in the other you turn but half the depth? Why sow this year wheat, and next year corn, thus alternating with successive seasons?

There must be somewhere a *cause* for all this; and shall our inquiries rest satisfied with the simple, naked fact, *that* the yield is greater, and the soil more vigorous when subjected to some established course of treatment? Is it not rather the part of wisdom to base all our efforts upon this broad and rational hypothesis—that nothing in all the universe of God is created in vain, and that which was not without the care and attention of the Creator, at least is worthy the reflection of the creature. Thus situated, there is no human avocation so replete with objects of interest, as that of the agriculturist. Nature becomes his laboratory, in which her laws and axioms form the crucible.

The various elements which enter into the composition of our soils, their relative affinities and capacity; the nourishment required to promote the health and vigor of our various grains and plants, and in fact, everything pertaining to their full and complete development becomes familiar to his mind. The barrenness or total failure of his neighbor's crop, is not regarded as an accidental freak of nature, but as a necessary and legitimate result of plain and demonstrable causes. If this be true, as indeed it seems most reasonable, how idle and how vain the

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effort to establish successful agriculture upon bare *experiment*. Must we subject ourselves to the labor and expense of a fruitless harvest—to the toils and anxiety of a barren year, that experience may teach us of the deficiency of our soil, when a knowledge of its properties would have disclosed the fact upon the instant of investigation? This would prove a poor economy indeed!

In saying this, we would not discard or underrate a knowledge of the practical details of agriculture. The sound discretion and sterling sense of the *purely* practical man cannot be too highly valued; yet their advantages may be immeasurably enhanced by a knowledge of scientific laws. Theory and practice should go hand in hand.

The limits within which I can properly claim your attention will not allow a specific detail of the many subjects which at once suggest themselves in this connection.

We can, therefore, at best bestow but a brief and comprehensive glance at some of the leading principles which experiment and scientific investigation have developed, as to the character and requirements of soils, the influence of light and heat upon the growth of plants, and the different theories for the improvement of the breed of stock, any one of which, were I competent for the undertaking, might profitably occupy a much longer time than we are allowed to-day.

The circumstances which surround the American farmer are not such at this day as to call forth that systematic and scientific inquiry, which very necessity creates in older and more limited countries, where lands are fully distributed and under immediate and constant cultivation. We have first to exhaust the strength and vitality of our *virgin* soil. The gradual deposits of unnumbered ages, adding new and rich nourishment to the broad extent of our forest and prairie lands, has left us a very Eden in this Western world; but having once availed ourselves of its pristine riches, and by the growth of successive crops absorbed its strength and vigor, it then becomes a question of the first importance how to supply to the best advantage ingredients so essential.

We find the elements required, predominating to a greater or less extent, in the various *manures*, ordinarily employed in strengthening and fertilizing our soils. But here we are met by the question often in dispute among our agriculturists, as to *what are the qualities* best adapted to particular species of vegetation. And in considering this, whatever may be the diversity of opinion arising from deductions at

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which we have arrived, we shall certainly all agree upon the general principle, that in the composition of all plants, there are certain substances which absolutely require the same or similar properties in the soil from which they are supported. From this hypothesis, then, we may each deduce our own conclusions as to the nature and extent of the fertilizer required.

Again, the properties of light and shade are found to exert an important influence upon the growth of plants; and from *this* we may derive a useful lesson. Certain plants, as mushrooms for instance, may be successfully produced when entirely removed from the influence of the open air and the light of day; while a tree and most other plants cannot exist without their presence; for the carbonic acid of the atmosphere is absolutely essential to their development, and by the absence of light, oxygen is withdrawn from the air, while the remaining properties tend rather to deteriorate than contribute to a healthy growth.

Marshal P. Wilder, of Boston, in an article upon this subject, says: "How necessary light is to the health of plants may be inferred from the eagerness with which they appear to long for it. How intensely does the sunflower watch the daily course of the sun! How do the countless blossoms nightly droop when he retires, and the blanched plant strive to reach an open chink through which his light may reach it! Thus a potatoe has been known to grow up in quest of light, from the bottom of a well twelve feet deep; and in a dark cellar a shoot of twenty feet in length has been met with, the extremity of which had reached and rested at an open window."

Mr. R. Hunt, of England, in experimenting upon the effect of different colored rays of light upon the growing plant, developed the following interesting results: He sowed cress seed, and exposed the different portions of the soil to the influence of rays of light transmitted through solutions of the same thickness, though of different colors. After ten days he observed under the blue light an abundant and luxurious crop of cress, of a bright green color, and with every indication of perfect health. Under the green light the crop was of a pale yellow, and sickly appearance; under the yellow only three plants appeared, while under the red a few more plants came up, but they were of an unhealthy hue. Upon the mutual transfer of the red and blue, the crop formerly beneath the blue so fresh and luxuriant, under the new color became at once blighted and sickly in appearance, while the meagre yield, first

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under the influence of the red assumed at once a vigorous growth, and new plants commenced springing up.

These experiments, and the results which they disclose, are well worthy the remembrance of those who may find it necessary to make a practical application of the same, in the construction of hot-houses, conservatories, or otherwise.

There are other branches connected with the science of agriculture, equally full of interest, and worthy of attention. We cannot, therefore with propriety, detain you longer upon these.

Different theories have been advanced by breeders, and those familiar with the various kinds of stock, as to the best method of establishing and maintaining superior breeds of cattle, and this subject has received no little attention, and has elicited extended and patient investigation.

As to the origin and kindred relations of distinct and separate breeds of domestic animals, we shall probably always find mankind at variance, like the frequent and spirited discussions among the curious and the learned, as to the origin of the human races. Whether upon the one hand, all spring from Adam as one common head, or, upon the other, whether from the very beginning, different, distinct and separate races were not created—questions profitable, perhaps, to sharpen the wits upon, but which, from their very nature, will never admit of satisfactory solution. We must, therefore, rest content, and base all experiments and investigations upon the actual and existing state of things, as presented in the lives and habits of the different species.

Among the more prominent and leading features presented to our observation is this—that species, as the very word would signify, are separate and distinct, presenting certain marked and peculiar features, dissimilar to corresponding ones in other kinds. In attempting, then to establish an intermediate grade by the union of any two, we must necessarily find in the class thus obtained, certain of those peculiar marks which distinguish each from which it was produced; and it is enunciated as a fixed and unvarying rule, that an intermediate grade of this character, even when thoroughly established by the most judicious crossing, cannot maintain itself as such; the tendency of each generation being to revert back to the original type of one or the other of its progenitors, and much too often, the inferior. Thus if left to produce and reproduce, it will be observed, after a few generations, to have lost

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its intermediate character, and to have assumed the distinctive features of one or the other of the original species only.

Here, then, arises the necessity of preserving a blooded and original stock among us, for pure blood, upon one side or the other, is absolutely essential to a profitable crossing.

Having at last arrived at a proper blending of the species, our labor is by no means complete. The constant exercise of our attention is equally essential to their welfare and development. The influence of climate, and the different modes of living, observed among domestic animals in various parts of the world, is truly wonderful. Thus it is said that cattle become generally very large and fat, when for generations they have been accustomed to rich, damp soils, with abundance of pasturage, and their legs become proportionately short and uncomely; while those reared in drier sections, where herbage is less nutritious and plentiful, present in these respects the very opposite characteristics. And were sheep transported from the climate of Vermont or Spain to that of the West Indies, the fleece once so soft, luxurious and fine in texture, in a few years would become as rough and coarse as the covering of the goat.

With all this properly in view, we may regulate the treatment and care of our various herds, according to the peculiar character and development required.

These facts, and many others which they will at once suggest, though crudely thrown together here, and, from want of necessary time, so destitute of illustration, all seem pertinent to the general principle previously advanced—that a knowledge of those fundamental truths, which in the great economy of nature, are employed in regulating and supporting the harmonious action of her laws, is necessary to the proper education of the successful agriculturist.

But distinct and separate from all this, we have other and higher responsibilities, where community of interest renders each dependent, to a greater or less extent, upon the labor of another, and the welfare of a common country, is directly proportional to the enterprise and integrity of its people.

Under the inspiration of this high conviction, Labor has learned to look upward; and beneath the workmen's rough and grotesque costume, beats an honest and a happy heart. He feels himself a man, not an accident of creation, with a mind to think, a heart to feel, and

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ability to execute. Literature and science find many an able champion in the mechanic's workshop, and theories of law and government are comprehended and discussed, at the farmer's fireside.

The criteria of merit is peculiarly American. No *privileged class* can here obstruct the pathway of the humblest devotee. All must labor in one common field, and he who gains preferment succeeds alone upon the score of merit.

But this is not all. The peculiar circumstances by which we have been thus far surrounded, has made our very name the synonym of nervous, restless enterprise; and no one class has contributed to this result, in an equal degree with the patriotic farmers of our country. They have proved not only the "bone and sinew" of our land, but its head and heart.

Almost within the memory of men now living, all were pioneers through a vast unbroken wilderness. Rude huts and lowly cottages were their only palaces; the woodman's axe, their instrument of progress, and border skirmishes, their romantic episodes. Time moved on apace, and the hardy yeomen of our land were compelled to leave the harrow and the plow, for another and severer struggle! for their very household gods stood trembling in the balance, while the booming cannon and the clash of arms, beat off the measure of this tragic verse. How well and how successfully they fought in their new calling, is familiar to the minds of all.

Since that time, less than a century has passed away, yet how crowded all its years with great events! Towns, villages, and cities have sprung from the depths of the wilderness, and hills, valleys and prairies, smile with abundant harvest. The clash and din of the battle field is long since hushed, and the tall grain waves above the graves of the dead, and another generation of men, more numerous, more youthful, and more full of hope, have learned to love and cherish the soil of their nativity.

To a people thus schooled, it is but natural that life should appear valuable only in proportion to its practical results; and thus it is, that the strong right arm and the willing heart which have marked the progress, and stimulated the sympathies of the tillers of our soil, have also left their lasting impress upon the character and habits of our entire people.

Having thus contributed so largely to the promotion and develop-

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ment of our present national resources, we find the annual products of our farming lands, the chief sustaining element in all commercial enterprise.

No illustration more forcible in its character, or more pertinent in its application, can be produced, than the pecuniary convulsion by which we are to-day surrounded. Railroads, banks, and manufactories are swept away without discrimination; public confidence has become everywhere alarmed, and ordinary business avocations almost suspended, while amidst the universal panic which broods like an evil spirit over the land, the fortunes of the few are built and strengthened upon the ruin of the many.

The sun now sinking towards the western hills, ere he sets, will gild the trappings of many a millionaire, while his earliest morning rays will shine upon the shattered ruins of their princely homes.

Where shall we find relief? The staple products of our soil begin to find a market in the East, and the silent action of this great conservative, allays the wild excitement of the times; public confidence is again restored; credit, once broken and exhausted, revives its sleeping energies, and peace and plenty smile upon the land once more.

Perhaps I have already presumed too far upon your attention and indulgence, yet it seems hardly fitting upon this occasion to neglect the separate mention of our fair and fertile Genesee.

Little more than twenty years ago—a period brief indeed in a nation's history—upon the ground where we now stand, surrounded by the various products of our land and ingenious works of art, the smoke was curling from the Indian's wigwam, and scarce beyond our present range of vision, where the tall spires of our churches point towards heaven, and the sound of the Sabbath bell calls us from labor to the house of prayer; where our public street now lined on either side with spacious blocks, seems alive with the hum and bustle of its business scenes, and many a private residence with its well appointed grounds, gives zest and beauty to the scene—the early pioneer, in his rude log-house, was startled by the loud, clear whoop of the savage hunter, or the last shrill cry of his stricken prey. How striking, and how significant the contrast! Well may you feel the glow of pleasure, and of pride, at the mention of our young and growing city! It is the offspring of your enterprise—the creature of your care.

To us, nature has been most lavish of her gifts; "Our lines," indeed,

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"are cast in pleasant places." For the quantity of produce to a given area, its superior quality and relative value in the markets of the east, we may successfully challenge the competition of any county in our State; while the universal air of thrift and plenty, which everywhere surrounds us, most plainly indicates that this rich heritage is appreciated, and enjoyed to its full extent.

I am not unmindful of the fact that there are many here to-day, whose locks are whitened by the frosts of many winters, and whose minds have become mature by the discipline and experience of many a successful issue in the great life-battle of the world. Nor can this, for an instant, be regarded as an inauspicious or unfortunate event, for it is to such that I appeal for confirmation and support.

All travelers and historians, who have become familiar with the physical and mental condition of the various nations of the world, have observed universally, that the physical condition and prosperity of a people, is directly proportional to their mental and moral endowments; once promote and cultivate the latter, and in this we have the surest guarantee of the full possession of the former.

"Life's more than breath and the quick round of blood—
It is a great spirit and a busy heart.
We live in deeds not years; in thoughts not breaths;
In feelings, not in figures on a dial.
We should count time by heart-throbs.
He most lives who thinks most, feels the noblest, acts the best.
Life's but a means unto an end, that end
Beginning mean, and end to all things—God."

How manifold and diversified, then, are the duties and responsibilities of the farmer, and how imperative the various demands upon his unceasing care and vigilance, constituting as they do, and ever must so large a portion of our people, enjoying the advantages of a retired and independent life and uncontaminated by the ingenious though pernicious schemes which warp men's virtues and stimulate their passions; in many of the more active scenes of life, we may well expect in them the more solid merits of the man, whose silent though potent influence shall mould and fashion the minds and morals of our land.

Why, then, in times to come, among those contributing most largely to the accomplishment of all these results, may we not find among the first and foremost, the name of Genesee?

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The God of Nature has given us the means, shall we not give ourselves the will?

GRAND TRAVERSE COUNTY.

No Society organized.

HILLSDALE COUNTY.

Official proceedings of the Hillsdale County Agricultural Society, at their 8th Annual Meeting, held at Hillsdale, Jan. 30th, 1858.

President, I. H. McCollum, in the Chair.

On motion of H. B. Tucker,

The report of the executive committee was read, approved and adopted.

On motion, the report of the treasurer was read, approved and adopted.

On motion, the following resolution was unanimously adopted:

Resolved, That the next annual fair of this Society be held in the village of Jonesville, on the 13th and 14th of October next; provided the inhabitants of said village, under the direction of the executive board of the Society, cause the erection of suitable buildings, pens, hitching posts and racks, for the use of the society, at said fair. Otherwise, that the fair be held in the village of Hillsdale, or such other place as the executive board may select.

On motion, the Society proceeded to the election of officers for the ensuing year, by ballot, which resulted as follows:

President—Wm. H. Miller, of Moscow.

Vice Presidents—Gideon Stoddard, of Litchfield; Hiram B. Chapman, of Reading; A. B. Slocum, of Wheatland.

Secretary—F. M. Holloway, of Fayette.

Treasurer—Fred. Fowler, of Reading.

Executive Committee—Wm. P. Richards, of Somerset; C. L. Treadwell, of Wheatland; David Wormley, of Pittsford; W. W. Brewster, of Wright; H. C. Malory, of Moscow; Wm. Knapp, of Adams; H. F. Sutton, of Jefferson; C. B. Shepard, of Ransom; Gideon G. King, of Amboy; Leonard Miller, of Scipio; Geo. C. Munro, north half of

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Fayette; Isaac Vandenbergh, south half of Fayette; Bani Bishop, of Cambria; J. B. Abbott, of Woodbridge; M. P. Herring, of Litchfield; Laban Howard, of Allen; Daniel Kline, of Reading; Richard Huggett, of Camden.

On motion, article nine of the constitution was so altered by a two-third vote of the Society, as to fix the price of membership tickets at 75 cents, and gate tickets at 20 cents each.

On motion, the treasurer was required to execute a bond to the Society, with two securities, of one thousand dollars, for the payment of all moneys that shall come into his hands by virtue of his office, the same to be approved by the Secretary.

Alticle five of the constitution was so altered, by a two-third vote of the society, as to read: "The annual meeting shall be held on the last day of the fair, in September or October, immediately after the address, at which time the officers of the society shall be elected for the ensuing year, which said officers shall enter upon their duties on the first Monday of January following.

The committee on farms and nurseries submitted a report, in writing, signed by Lewis Emery and Gideon Stoddard, awarding to Henry Packer, of Litchfield, the first premium on farms, and to Daniel L. Pratt, of Fayette, a discretionary premium of diploma for the best farm barn.

REPORT OF EXECUTIVE COMMITTEE.

The undersigned, on behalf of the executive committee of the Hillsdale County Agricultural Society, hereby respectfully make to you their annual report:

It is with satisfaction that we record the fact that the interests of its members in the prosperity of our society has not abated, and that its influence in promoting the agricultural welfare of the county has not diminished. The evidences of interest and usefulness exhibited on the occasion of the last annual fair, sufficiently warrant its friends in taking courage, and in looking for greater results.

Thus far the society has been enabled to offer a liberal, and, from year to year, an increased list of premiums, and to meet all its awards and expenses without embarrassment. It would be unjust, however, to make this statement without giving credit to the citizens of the villages of Hillsdale and Jonesville for the liberality they have always exhibited

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in relieving the society from the trouble and expense of fitting up the grounds, which has been no slight tax upon them.

Neither would we neglect to acknowledge the assistance we have received from the treasury of the county, without which, and the assistance of the citizens of Hillsdale and Jonesville above suggested, the society must have failed to realize its present prosperity, and we might have been called upon to yield up to our successors an empty treasury and a bankrupt credit.

Whilst, however, we would acknowledge our obligations to the county for what the board of supervisors have done for our society, we must express our surprise and regret, that they so far fail to appreciate its importance and usefulness in advancing the interests of agriculture in our county, of which calling so many of the board are honorable members, as to appropriate to our use only one-fourth of the amount they are authorized by law to raise by general tax for that purpose.

We all understand the embarrassed condition of the monetary affairs of the country, and the stagnating influence which that embarrassment exerts over all industrial pursuits, and perhaps now feel it more than the husbandman who relies upon the production of the soil not only for his bread but for the means of liquidating pecuniary obligations, and of procuring facilities for the improvement of his farm, and the advancement of his prosperity. For when the channels of trade and commerce become stagnant, it is difficult and oftentimes impossible for him to find a market for his productions, even at remunerating prices. It is by no means strange that such a state of things as now exists in the pecuniary affairs of the country, should induce a spirit of economy, as well on the part of the board of supervisors, in the management of the people's finances, as of the individuals themselves in the management of their private affairs. But there is such a thing as economy, which may be more expensive in its results than a prudent liberality. In this light we consider the course of the board of supervisors in reducing the amount to be raised by general tax for agricultural purposes, from one-tenth of a mill, which the law authorizes, to one-fortieth of a mill on the valuation of the county. The difference between the amount which would be raised with one-tenth, and which has been with one-fortieth of a mill, would be strikingly advantageous to the society, enabling it to become more efficient, which the few cents the tax-payers would be called upon to advance more than is now required, would be

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by most scarcely perceptible. Besides the money thus raised tax them with the revenues of the society, itself is paid back to the people in a way which not only compensates the receiver for his trouble in bringing his productions to the fair for exhibition, but in that induces a spirit of emulation and a desire for improvement, the good results of which have already exhibited themselves in the advancement of the agricultural interests, character and reputation of our county. May the time be far distant when the evil store of parsimony shall so far control the action of the board of supervisors as to cripple the usefulness of the Hillsdale County Agricultural Society.

A few statistics will exhibit to you the doings of the society the last year.

The fair was held upon the society grounds near the village of Hillsdale, on the 13th and 14th days of October, 1857.

The number of membership tickets sold, is	874
No. other tickets sold,	1704
No. entries of cattle,	120
" horses,	219
" sheep,	58
" swine,	8
" poultry,	13
" domestic manufactures,	222
" product of farms,	288
Unenumerated articles,	37
" Farm, nurseries, &c.,	1
No. entries in 1857,	968
" 1856,	854
being an increase of	114

which is an evident indication of an increasing interest in, and usefulness of the society.

No. premiums awarded on the above entries.

Cattle,	78
Horses,	46
Sheep,	26
Swine,	6
Poultry,	7

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Domestic manufactures,	119
Products of farms,	76
Unenumerated articles,	9
Farm, nurseries, &c.,	1
Total No. premiums awarded,	368

On the occasion of the late fair, an able and instructive address was delivered by C. B. Fisk, Esq., of Coldwater, which was listened to with marked attention, and at the close of which a vote of thanks was tendered to the speaker, and a copy of the address solicited for publication.

In closing our duties as officers of this Society we desire to express to you our conviction of its usefulness, our desire for its continued prosperity, and to assure you that our cheerful co-operation in whatever the interest of the society demand, may be relied upon. We refer you to the treasurer's report for a statement of the finances.

All of which is respectfully submitted.

I. H. McCOLLUM, *Chairman.*

F. M. Holloway, *Secretary.*

The undersigned, treasurer of Hillsdale County Agricultural Society, would respectfully report, the amount of monies from all sources, as received for the year 1857, as follows:

Amount received of Geo. C. Munro, late treasurer,		$117 99
Amount from county treasurer for 1857,		258 12
Amount for 874 membership tickets at 50 cents,		437 00
Amount for 1704 gate tickets at 10 cents,		170 40
Total,		$983 51
Expended as follows:		
Paid orders for general expenses,	$192 22	
" premiums, cash and books,	606 47	
" for stolen goods,	15 00	
" for expenses of previous year,	11 20	
		824 89
Balance on hand,		$158 62

All of which is respectfully submitted.

F. FOWLER, *Treasurer.*

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PREMIUMS

Awarded at the Seventh Annual Fair of the Hillsdale County Agricultural Society, held at Hillsdale, Oct. 13th and 14th, 1857.

DIVISION A.

CLASS I.

Durhams.

1st premium, bull 4 years old, W. F. Sands, dip. and $4 00
2d " bull 6 years old, W. T. Lyons, ... 4 00
1st " bull 3 years old, Wm. Curtis, dip. and 3 00
1st " bull 1 year old, E. Van Valkenbergh, Trans. State Ag. Society 1855 and 1 00
2d premium, bull 1 year old, E. Van Valkenbergh, ... 1 00
1st " bull calf 10 weeks old or over, E. Van Valkenbergh, Mich. Farmer 1858 and 1 00
2d premium, bull calf 10 weeks old or over, L. Strong, ... 1 00
1st premium, cow 4 years old or over as a stock raiser, E. Van Valkenbergh, dip. and 3 00
2d premium, cow 4 years old or over as a stock raiser, Thomas Burt, ... 3 00
1st premium, cow 3 years old or over as a stock raiser, William Curtis, Trans. State Ag. Society 1855 and 3 00
2d premium, cow 3 years old or over as a stock raiser, E. Van Valkenbergh, ... 3 00
1st premium, heifer 2 years old, L. Strong, Dadd's Am. Cattle Doctor and 2 00
2d premium, heifer 2 years old, E. Van Valkenbergh, ... 2 00
1st premium, heifer 1 year old, W. T. Lyons, Michigan Farmer 1858 and 2 00
2d premium, heifer 1 year old, S. B. White, ... 1 50
1st premium, calf 10 weeks old or over, Wm. Curtis, Guenon's Treatise on Milch Cows and 1 00
2d premium, calf 10 weeks old or over, E. Van Valkenbergh, 1 00

The committee recommend a discretionary premium to Wm. Curtis for a heifer in the foregoing class, entered by him as one year old, which the committee judge to be two years old, but pronounced her to be in either case a very splendid animal. The Society therefore award a premium to Mr. Curtis of Dadd's American Cattle Doctor and $2.

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CLASS II.

Devons.

1st premium, bull 4 years old, A. G. Edwards, dip. and..... $4 00
1st " " 3 " G. Stoddard, dip. and..... 3 00
1st " " 2 " W. H. Miller, dip. and..... 2 00
2d " " 2 " W. R. Montgomery,..... 2 00
1st " " 1 year old, E. Van Valkenbergh, Trans. State Ag. Society 1855 and..... 1 00
2d premium, bull 1 year old, W. H. Miller,..... 1 00
1st " bull calf 10 weeks old or over, E. Van Valkenbergh, Mich. Farmer 1858 and..... 1 00
2d premium bull calf 10 weeks old or over, W. H. Miller,.... 1 00
1st premium, cow 4 years old as a stock raiser, W. H. Miller, dip. and..... 3 00
2d premium, cow 6 years old as a stock raiser, L. J. Thompson, 3 00
1st " heifer 3 years old as a stock raiser, I Vanderbergh, Trans. State Ag. Society 1855 and..... 3 00
2d premium, heifer 3 years old as a stock raiser, J. Holtenhouse, ... 3 00
1st premium, heifer 2 years old as a stock raiser, W. H. Miller, Dadd's Am. Cattle Doctor and..... 2 00
1st premium, heifer calf 10 weeks old or over, W. H. Miller, Guenon's Treatise on Cows and..... 1 00
2d premium, heifer calf 10 weeks old or over, W. H. Miller,.. 1 00

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CLASS III.

Cross of Bloods.

1st premium, bull 4 years old, Joel Cunningham, dip. and.... $2 50
2d " " 7 " Ira B. Card,..... 2 50
1st " " 2 " Henry Truman, Trans. State Ag. Society 1855 and..... 1 50
1st premium, bull 1 year old, W. C. Swift, Allen on Diseases of Domestic Animals and..... 1 00
1st premium, heifer 3 years old, J. Holtenhouse, Guenon's Treatise on Cows and..... 1 00

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1st premium, heifer 2 years old, J. Holtenhouse, Allen on Diseases of Domestic Animals and $1 00
1st premium, heifer 1 year old, Thomas Burt, Dadd's American Cattle Doctor.....
2d premium, heifer 1 year old, W. T. Lyon, Allen on Diseases of Domestic Animals.....

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CLASS IV.

Cross of Blood and Native.

1st premium, bull 4 years old, John C. Swift, dip. and..... $2 50
1st " " 2 " John Cole, Dadd's Am. Cattle Doctor and..... 1 00
2d premium, bull 2 years old, H. K. Abbott,..... 1 00
1st " bull 1 year old, B. B. Willett, Dadd's Am. Cattle Doctor and..... 1 00
2d premium, bull 1 year old, H. B. Chapman,..... 1 00
1st premium, bull calf 10 weeks old or over, F. Fowler, Mich. Farmer 1858 and..... 1 00
2d premium, bull calf 10 weeks old or over, G. Stoddard, Mich. Farmer 1858.....
1st premium, cow as stock raiser, Thomas Burt, dip. and..... 2 00
2d " " " H. K. Abbott,..... 2 00
1st " heifer 3 years old, A. M. Kellogg, Guenon's Treatise on Milch Cows and..... 2 00
1st premium, heifer 2 years old, J. W. Ten Eyck, Guenon's Treatise on Milch Cows and..... 1 50
2d premium, heifer 2 years old, G. Stoddard,..... 1 50
1st premium, heifer 1 year old, L. Strong, Milburn & Stevens on Cows and Dairy and..... 1 00
2d premium, heifer 1 year old, H. K. Abbott,..... 1 00
1st premium, heifer calf 10 weeks old and over, A. Benjamin, Evans' Dairyman Manual.....
2d premium, heifer calf 10 weeks old and over, C. C. Holloway, Mich. Farmer for 1858.....

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CLASS V.

Natives.

1st premium, cow, W. Whitney, dip. and $2 00
2d " " G. Stoddard, ... 2 00
1st premium, heifer 1 year old, W. T. Lyons, Evans' Dairy Manual and 1 00
2d premium, heifer calf 10 weeks old or over, A. M. Kellogg, Michigan Farmer 1858 .....

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CLASS VI.

Milch Cows.

No entries.

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CLASS VII.

Work Oxen—Cross of Durham and Native.

1st premium, yoke of steers 3 years old, E. Van Valkenbergh, Trans. State Ag. Society 1855 and $3 00
2d premium, yoke of steers, 3 years old, Wm. Curtis, ... 3 00
2d " " " 2 " E. Van Valkenbergh, . 2 00

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CLASS VIII.

Work Oxen and Steers—Cross of Devon and Native.

1st premium, work oxen 5 years old or over, G. Howard, dip. and $4 00
2d premium, work oxen 5 years old or over, V. Barker, ... 4 00
1st premium, steers 4 years old, L. W. Green, dip. and 3 00
1st " " 3 " J. Whitaker, Trans. State Ag. Society 1855 and 3 00
1st premium, steers 2 years old, J. P. Hill, Dadd's Am. Cattle Doctor and 2 00
2d premium, steers 2 years old, F. Fowler, ... 2 00
1st premium, steers 1 year old, L. W. Green, Mich. Farmer 1858 and 1 00

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CLASS IX.

Work Oxen and Steers—Natives.

1st premium, work oxen 5 years old and over, B. Fisher, dip. and $4 00
2d premium, work oxen 5 years old and over, P. F. Terpening, 4 00
1st premium, steers 3 years old, P. F. Terpening, Trans. State Ag. Society 1855 and 3 00
2d premium, steers 3 years old, E. Van Valkenbergh, ... 3 00

CLASS X.

Fat Cattle.

Second fat ox, W. T. Lyons, ... $2 00
" fat cow, N. S. Sharp, ... 2 00
Committee report none worthy of first premium.

DIVISION B.—HORSES.

CLASS I.

Horses for All Work.

2d premium, stallion 5 years old, Joseph Bloodgood, ... $6 00
3d " " 5 " H. Turner, ... 5 00
1st " " 4 " B. Farmer, dip. and 5 00
1st " " 3 " tag No. 21, name doubtful, dip. and 3 00
2d premium, stallion 2 years old, H. H. Ferris, Dadd's Modern Horse Doctor and 3 00
3d premium, stallion 2 years old, J. Taylor, History of Morgan Horses and 2 00
1st premium, span of horses 7 years old, Mr. Weaver, dip. and 4 00
2d " " " 5 " Job Card, Youatt on the Horse and 4 00
3d premium, span of horses 7 years old, L. A. Howard, Hinds' Farrier and 3 00

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CLASS II.

Geldings under four years old and Horse Colts under two years old.

1st premium, span of geldings, 3 years old, B. B. Howard, diploma and $3 00
1st premium, gelding, 3 years old, B. Mallory, Allen on disease of domestic animals, and 2 00
2d premium, gelding, 3 years old, B. Benson, Hinds' farrier and 1 00
3d " " 3 " M. P. Herring, ... 1 00
1st premium, span of geldings, 2 years old, E. Wilbur, dip. and 2 00
2d " " " 2 " S. B. Paylor, Dadd's Anatomy and Physiology of the Horse and 1 00
2d premium, gelding, 2 years old, L. Olney, ... 2 00
3d " " 2 " B. A. Bowen, Hinds' Farrier.
1st premium, horse colt, 1 year old, E. Van Valkenbergh, Youatt on the Horse and 1 00
2d premium, horse colt, 1 year old, L. F. Holloway, Dadd's Modern Horse Doctor and 1 00
3d premium, horse colt, 1 year old, H. B. Chapman, ... 1 00
1st " horse colt, 4 months old or over, E. L. Kelly, ... 2 00
2d premium, horse colt, 4 months old or over, F. Andrews, ... 1 50

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CLASS III.

Breeding Mares and Mare Colts.

1st premium, brood mare, L. P. Roode, diploma and $3 00
2d " brood mare, B. Howard, ... 3 00
1st " mare colt, 3 years old, E. Van Valkenbergh, ... 2 00
2d " mare colt, 3 years old, J. Wood, ... 1 50
3d " " 3 " J. J. Jones, ... 1 00
1st " " 2 " A. Goff, Trans. State Society, 1855, and 1 00
2d premium, mare colt, 2 years old, B. B. Huff, ... 1 50
1st " " 1 year old, F. Fritts, ... 2 00
2d " " 1 " F. Andrews, ... 1 50
1st " sucking colt, B. Howard, ... 1 00
2d " " J. C. Warner, Allen on Diseases of Domestic Animals.

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CLASS IV.

Draught Horses.

1st premium, span of horses, C. Kane, Dadd's Anatomy and physiology of the Horse and $2 00
2d premium, span of mares, E. Van Valkenbergh,..... 3 00
1st " single horse, A. Cohoon,..... 2 00
2d " " F. Fritts,..... 1 00
1st premium, stallion, E. Worden, diploma and..... 4 00

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CLASS V.

Matched and Single Horses.

1st premium, span of matched horses, C. L. Treadwell, diploma and..... $4 00
2d premium, span of matched horses, L. D. Weaver,..... 4 00
3d " " " W. O. Hoeg,..... 3 00
1st " single horse, Mr. Pease, diploma and..... 2 00
2d " " D. Watson,..... 3 00
3d " " J. McKercher,..... 2 00

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CLASS VI.

Home or Foreign Horses.

1st premium, stallion, 3 years old, C. L. Treadwell, diploma and $5 00
2d " " 7 " B. C. Benson, History of Morgan Horses and..... 4 00
3d premium, stallion, 2 years old, W. W. Roode, foreign,..... 4 00

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DIVISION C.

CLASS I.

Spanish Merino.

1st premium, buck, 3 years old, H. Huff, diploma and..... $2 00
2d " " 1 year old, I. Vandenbergh,..... 2 00
1st " " 2 years old, H. Huff, diploma and..... 2 00

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2d premium, buck 2 years old, I. Vandenbergh,..... $2 00
1st " pen 5 ewes, 3 years old, H. Huff, Randall's Sheep Husbandry and..... 2 00
2d premium, pen 5 ewes, 2 years old, I. Vandenbergh,..... 2 00
1st " pen 5 lambs, H. Huff, Randall's Sheep Husbandry and..... 2 00

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CLASS II.

French Merino.

1st premium, buck, 3 years old, F. Kies, diploma and..... $2 00
1st " buck, 1 year old, L. J. Thompson,..... 2 00
1st " pen ewes, 3 years old, L. J. Thompson, Randall's Sheep Husbandry and..... 2 00
1st premium, pen of ewes, 1 year old, L. J. Thompson, Youatt on breeds and management of Sheep and..... 2 00

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CLASS IV.

Cross of Bloods.

1st premium, buck, 3 years old, I. Vandenbergh, diploma and.. $2 00
1st " buck, 2 years old, L. W. Green, diploma and... 2 00
2d " buck, 2 years old, S. B. Taylor,..... 2 00
1st " buck, 1 year old, L. W. Green,..... 2 00
2d " buck, 1 year old, L. J. Thompson,..... 1 00

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CLASS IV.

Grades.

1st premium, pen 5 ewes, 3 years old, H. H. Ferris,..... $2 00
2d " pen 5 ewes, 2 years old, H. H. Ferris,..... 1 00

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CLASS VI.

Leicestershire, Bakewell, Southdown and Cotswold.

1st premium, Leicestershire buck, 3 years old, E. Van Valkenbergh,..... $2 00

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2d premium, Leicestershire buck, 3 years old, D. Wormley,.. $1 00
1st " Southdown buck, 1 year old, W. Curtis,..... 2 00
2d " Leicestershire buck, 2 years old, E. Van Valkenbergh,..... 1 00
1st premium, pen of 5 Liecestershire buck lambs, T. Burt,.... 2 00
2d " Liecestershire buck lamb, W. Curtis,..... 1 00

CLASS VII.

Fat Sheep.

1st premium, Liecestershire, on grass,..... $2 00
2d " " " 1 00

CLASS VIII.

Swine.

2d premium, Suffolk boar, D. Wormly,..... $2 00
2d " Essex boar, W. R. Montgomery,..... 2 00

NOTE BY THE SECRETARY.—It is proper to state that Mr. Montgomery holds the certificate of Mr. — Harris, the breeder, and Sandford Howard, Esq., of Boston, certifying that his pig is a full blood Essex, and that the parents took the first premium, as such, at the National Fair at Boston, 1855.

Discretionary premium to L. J. Thompson, cross of blood breeding sows, very good,..... 2 00
Discretionary premium to P. Dresser, sow and ten pigs, second rate,..... 2 00
Discretionary premium to J. Odell, boar, second rate,..... 1 00
" " J. J. Jones, second rate,..... 1 00

DIVISION D.

CLASS I.

Poultry.

Coop of Brahma Pootra, L. J. Thompson,..... $1 00
" Cochin China, D. Hammond,..... 1 00

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Coop of Bantams, A. Bolles,..... $1 00
" Turkies, J. H. Smith,..... 1 00
" Pea Fowles, L. Howard,..... 1 00
" Guinea Fowls, J. W. Sampson,..... 1 00
" Ducks, H. Purdy,..... 1 00

DIVISION E.

CLASS I.

Wagons and Carriages.

1st premium, farm wagon, J. C. Peck, diploma and..... $3 00
2d " " " 3 00
1st " two horse carriage, J. Sinclair, diploma and..... 3 00
1st " single carriage, covered, J. C. Peck, diploma and. 2 00
2d premium, single carriage, J. C. Peck,..... 2 00
1st " sulky, P. C. Crary,..... 2 00

CLASS II.

Farm Implements.

Double plow, O. & A. Gale,..... $2 00
Sod plow, " 1 00
Plow for all land, " 1 00
Straw cutter, Chandler & Co.,..... 1 00
Corn sheller, " 1 00
Discretionary premium for three plows and wheat cultivator, foreign, Lewis & Harrington,.....Diploma.
Discretionary premium, for grain cradle, S. Williams,..... 1 00
" " for stump machine, foreign, diploma and 2 00
" " for horse rake, Thos. Race,..... 1 00
" " cider mill, foreign, L. Emery,.....Diploma

CLASS III.

Furniture, Cooperage and Tools.

Discretionary premium to S. P. Purdy for finished furniture, diploma and..... $3 00

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Discretionary premium to S. P. Purdy for spring bed	$1 00
To Horace Robbins, pork barrel	50
" " butter firkin	25
" " sett work ½ bushel and churn	50
To Calvin Bolles, barrel cask	50
To George Bolles, vinegar cask	50
To J. Reed, joiners tools	1 00

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CLASS IV.

Domestics.

1st premium, pair woolen blankets, Miss Lydia Cleveland,	$1 00
2d " " " Mrs. A. C. Gale,	50
1st " " sheets, Mrs. Da Lee,	1 00
2d " " " Mrs. S. W. Rising,	50
1st " 10 yards flannel, hand manufactured, Mrs. L. P. Roode,	1 50
2d premium, 10 yards flannel, hand manufactured, Lydia Cleveland,	1 00
1st premium, 10 yards woolen carpet, Mrs. C. Stimpson,	1 00
2d " " " " Mrs. Justin Barber,	75
3d " " " " Mrs. Justin Barber.	50
1st " " rag carpet, Mrs. L. J. Thompson,	1 00
1st " hearth rug, Mrs. B. Gale,	1 00
2d " " Mrs. Adaline C. Gale,	50
1st " pair woolen stockings, Mrs. M. Fairfield,	1 00
2d " " " Mrs. L. J. Thompson,	75
3d " " " Mrs. A. Ransford,	50
1st " pair wool socks, Mrs. H. M. Thorp,	75
2d " " " A. M. Kellogg,	50
1st " wool knit mittens, Mrs. H. M. Thorp,	50
2d " " " Mrs. S. E. Smith,	25
1st " woolen coverlet, Mrs. S. A. Wade,	2 00
2d " " " Mrs. Adaline C. Gale,	1 00
1st " satinet, J. C. Hill,	1 00
1st " woolen shawl, Miss Lydia Cleveland,	3 00
2d " " " "	2 00

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3d premium, woolen shawl, Miss Lydia Cleveland,..... $1 00
1st " quilt pieced in white, Mrs. S. A. Adams,..... 2 00
2d " " " Mrs. Robert Worden,..... 1 00
1st " " in colors, Mrs. M. Fairfield,..... 2 00
2d " " " Miss E. A. Langdon, aged 15 years,..... 1 00
1st premium, sample woolen yarn, Mrs. T. T. Phillips,..... 1 00
2d " " " Mrs. A. J. Baker,..... 50
1st " pair cowhide boots, Capt. C. C. Flint,..... 1 00
1st " pair calf boots, A. Myers,..... 1 00

Discretionary premiums were granted on the following articles:

Piece of rag carpet, Mrs. S. Adams, ... 1 00
Counterpane, Mrs. John Smith,..... 1 50
Linen towels, Mrs. John Smith,..... 50
Pair knit silk gloves, Mrs. Wyllis,..... 50
Quilt design, Mrs. L. Squires,..... 1 00
Two blankets, Mrs. J. Randolph,..... 1 00
Three pair boots, heavy kip and light calf, C. C. Flint,.....Diploma.

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CLASS V.

Needle Work and Embroideries.

Best specimen of embrodiery, Mrs. Augustus Gale,..... $1 00
1st premium, ottoman cover, Mrs. C. Smith,..... 1 00
2d " " " Miss Julia McCarty,..... 50
1st " worsted work chair tidy, Mrs. A. Hammond,..... 1 00
2d " " " " Mrs. J. B. Baldy,..... 50
1st " lamp mat, Mrs. H. B. Rowlson,..... 1 00
2d " " Mrs. F. S. White,..... 50
1st " underdress, Mrs. E. C. Minor,..... 1 00
1st " embroidered ladies' skirt, Mrs. Henry Huff,..... 1 00
2d " " " " Mrs. L. A. Gere,..... 50
2d " bands or bottoms, Miss F. J. Cressy,..... 50
1st " knit edging or insertings, Mrs. Phillips,..... 1 00
1st " ladies' cap, Mrs. Augustus Gale,..... 1 00
1st " ladies' chemise, Mrs. E. C. Minor,..... 1 00
1st " embroidered infants' slippers, Mrs. H. L. Hall,.. 1 00

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1st premium, embroidered gents's slippers, C. W. Lake,..... $1 00
1st " " undersleeves, Mrs. C. Delevan,..... 1 00
1st " " handkerchief, Miss Jennie Gardner,.. 1 00
2d " " " Miss F. J. Cressy,..... 50
1st " collar, Miss Jennie Gardner,..... 1 00
2d " " Miss Olivia Gardner,..... 50
1st " infant's flannel skirt, Mrs. M. A. Pitts,..... 1 00
2d " " " " Mrs. H. T. Farnam,..... 50
1st " infant's blanket, Mrs. L. T. Miller,..... 1 00
2d " " " Mrs. M. A. Pitts,..... 50
1st " port folio, Mrs. Augustus Gale,..... 1 00
Discretionary premium, emb. ladies' night dress, Miss Jane A. Proudley,..... 1 00
Discretionary premium, satin embroidery, Mrs. A. W. Webster, 1 00
" " ladies' satin bonnet, Miss Mary Webster, 1 00
" " velvet bonnet, Mrs. E. J. Keating,..... 1 00
" " embroidered cushion, Mrs. J. B. Baldy, 1 00
" " case of hair work, Miss Hattie Parmelee, 1 00
" " worked lace veil, Mrs. C. Smith,..... 1 00
" " broadcloth cape, Miss Waterman,..... 1 00

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CLASS VI.

Painting, Drawing, Daguerrotypes and Flowers.

1st premium, crayon penciling, Miss F. J. Cressy,..... $1 00
2d " " " " 50
1st " monochromotic, Prof. C. H. Churchill,..... 1 00
1st " oil painting, F. J. Cressy, diploma and..... 3 00
2d " " " 3 00
1st " perspective drawing, F. J. Cressy,..... 3 00
1st " best and greatest variety of flowers, H. D. Buck, American Florist Guide and..... 1 00
2d premium, 2d best and greatest variety of flowers, Mrs. S. Hammond,..... 1 00

Discretionary premiums were awarded for the following articles on exhibition:

J. S. Whittaker, for front elevation of church, diploma and... 2 00

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Mrs. A. W. Webster, case wax flowers, fruits and birds, dip. and $2 00
Miss Julia McCarty, " " " " 2 00
G. A. Holloway, linear drawing village map, ... 3 00
Miss F. J. Cressy, best specimen leather work, ... 1 00
" " coil wax flowers, ... 1 00
N. S. Dewey, for fine gallery of photographs and ambrotypes, diploma and 2 00
H. T. Farnam, collection dried grasses and flowers, ... 1 00

DIVISION E.

CLASS 1.

Fruit.

1st premium, 26 varieties winter apples named and labeled, J. Sinclair, Elliott's Am. Fruit Growers Guide, and $2 00
2d premium, 24 varieties winter apples named and labeled, E. Van Valkenbergh, ... 1 00
1st premium, 7 varieties fall apples, W. Whitney, Coles Am. Fruit Book and 2 00
2d premium, 8 varieties fall apples, C. Peterson, ... 1 00
1st premium, grapes, A. Cozens, ... Allen on Culture of Grapes.
2d " I. C. Gaige, ... Charlton's Grape Growers Guide.
1st premium, 3 varieties peaches, Dr. D. Beebe, ... 1 00
2d " 4 " " N. Brand, ... 50
1st " quinces, E. Rogers, ... 1 00
2d " " C. W. Lake, ... 50
1st " winter pears, Dr. D. Beebe, Coles Am. Fruit Book and 1 00
1st premium, autumn pears, Wm. Crane, Cole's Am. Fruit Book and 1 00
2d premium, autumn pears, Dr. D. Beebe, ... 1 00
Dis. " 5 winter pears, Hon. E. H. C. Wilson, ... 1 00
Dis. premium, jar pickled peaches, W. T. Lyons, ... 50
1st premium, jar preserved peaches, W. T. Lyons, ... 1 00
1st " jar preserved raspberries, Mrs. H. B. Tucker, ... 1 00
1st " jar preserved cherries of 1856, Mrs. H. B. Tucker, 50
1st " dried apples, Chas. Peterson, ... 1 00

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2d premium, dried apples, S. N. Betts,..... $0 50
Dis. " basket Seedling Grapes, Miss Carrie Cressy,..... 50

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CLALS II.

Butter, Cheese and Bread.

1st premium, butter, Mrs. A. Rausford, Guenon's Treatise on Milch Cows, and..... $1 00
2d premium, butter, Mrs. C. Delavan,..... 1 00
1st " cheese, Mrs. Wm. S. Hosmer, dip. and..... 1 00
2d " " Mrs. J. Corey, Guenon's Treatise on Milch Cows and..... 1 00
Best sample of corn bread, Mrs. P. Dresser,..... 50
1st premium, bread, salt or milk rising, Mrs. I. C. Gaige,..... 50
2d " " " " Mrs. A. Keefer,..... 50
1st " pan white biscuit, Mrs. I. C. Gaige,..... 50
2d " " " Mrs. T. T. Phillips,..... 25

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CLASS III.

Honey and Sugar.

1st premium, 10 lbs. honey, N. Palmer, Quimby's Mysteries of Bee Keeping and..... $0 50
2d premium, 10 lbs. artificial honey, W. T. Lyons,..... 50
1st " 10 lbs. maple sugar, B. B. Willetts,..... 1 00

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CLASS IV.

Vegetables.

Best 2 heads cauliflower, J. R. Simpson,..... $0 50
" broccoli, J. R. Simpson,..... 50
" win lettuce, W. W. Murphy,..... 50
Best quarter of an acre potatoes of not less than 50 bushels—1 bushel exhibited by I. C. Gaige,..... 2 00
Best peck of onions, John Smith,..... 50
" peck of potatoes, Mr. Weaver,..... 50

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Best peck of Swedish turnips, John Smith, ... $0 50
" ruta bagas, Wm. Waldron, ... 50
" peck of carrots, L. J. Thompson, ... 50
" peck of hollow crowned parsnips, H. B. Chapman, ... 50
" 3 heads cabbage, W. W. Murphy, ... 50
" bushel mangel-wurzel beets, J. R. Simpson, ... 50
" peck of tomatoes, H. B. Tucker, ... 50
" 3 heads celery, H. B. Tucker, ... 50
" egg plant, J. R. Simpson, ... 50
" sweet corn, J. R. Simpson, ... 50
" small pop corn, H. B. Tucker, ... 50
" squash, John Cole, ... 50
" pumpkins, A. M. Kellogg, ... 50
" citron, D. Wormley, ... 50
Greatest variety of culinary vegetables, raised by exhibitor, J. R. Simpson, ... 2 00

Discretionary premiums were awarded as follows:

Dozen red peppers, Spencer Fisher, ... 25
3 purple Kohl Rabi, B. B. Willetts, ... 25
12 winter radishes, J. R. Simpson, ... 25
2 French pumpkins, N. Leeson, ... 25
2d largest variety of culinary vegetables, H. B. Tucker, ... 1 00

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CLASS V.

Flour and Grain.

1st premium, 5 acres white wheat, Abram Keefer, dip. and ... $5 00
2d " " " Abram Cozens, Trans. State Ag. Society 1855 and 3 00
Disretionary premium, best 5 acres red wheat, J. C. Swift, ... 2 00
" " 2d best do., A. Cozens, ... 1 00
1st premium, 5 acres corn, 114 bushels of shelled per acre, D. Birdsall, dip. and 5 00
2d premium, 5 acres corn, 168 bushels of ears per acre, I. C. Gaige, Trans. State Ag. Society 1855 and 3 00
Discretionary premium, 5 acres of yellow corn, 150 bushels of ears per acre, Rogers, ... 2 00

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Discretionary premium, oats, no quantity given per acre, J. J. Jones, ... $1 00
Discretionary premium, oats, no quantity given per acre, A. M. Kellogg, ... 50
Discretionary premium, barley, no quantity given per acre, P. F. Terpening, ... 1 00
Discretionary premium, 1 bushel rye, J. Smith, ... 50
" " 12 quarts millet, very fine, J. C. Hill, .. 50
Peck timothy seed, J. B. Norris, ... 1 00
Discretionary premium, one bushel smutty yellow flint corn, P. F. Terpening, ... 50
Discretionary premium, one bushel seed corn, very fine, C. Proudley, ... 50

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CLASS VI.

Plowing Match.

1st premium, single plow, one span of horses, Joel Hand by A. Polhemus, dip. and $5 00
2d premium, single plow, one span of horses, S. N. Betts, ... 5 00
3d " " " " E. Van Valkenbergh, by M. Perry, ... 3 00

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CLASS VII.

Farms and Nurseries.

Committee on farms and nurseries have been under the necessity of asking further time in which to make up their report, which time has been granted, and the report will be declared at the annual meeting in January next.

The following premiums were awarded on unenumerated articles:

For improved horse shoes, Geo. Relya, ... $0 50
Building brick, R. Campbell, ... 50
Sugar cane syrup, E. P. Purdy, ... 50
Bottle currant wine 1 year old, John Smith, ... 50
Patent bee hive with bees, L. E. Gibbs, ... 50

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Portable Fence, B. Hallett,	$1 00
Cage of Canary Birds, S. W. Rising,	50
Mower and reaper combined, foreign, N. S. Post,	Dip.
Manufactured tallow candles, J. C. Beals,	50

The cash premiums will be paid at any time before January 1st, by A. Hammond, at his store in Hillsdale.

The Books and Diplomas will be delivered by me at the Post Office at Hillsdale, after the 15th of November next.

F. M. HOLLOWAY,
Secretary.

INGHAM COUNTY.

SECRETARY'S OFFICE OF INGHAM CO. AG'L SOC'Y,
Mason, August 2d, 1858.

R. F. JOHNSTONE, ESQ., *Sec'y Mich. State Agricultural Society*:

SIR:—In compliance with the requirements of law, (1st compiled laws, p. 543, sec. 1699,) and special request from yourself, I have the honor herewith to transmit to you a statement of the transactions of the Ingham County Agricultural Society for the year 1857, together with a detail of the receipts and expenditures thereof, list of the premiums awarded at the Fair, and a copy of the annual address delivered before the Society at the last Annual Fair, by O. M. Barnes, Esq.

As this Society has never before transmitted to your office a full report of its proceedings for previous years, I beg leave, therefore, to transmit to you, together with this statement, a brief history of the organization, the progress, and the present condition of this young but progressive Society. Its age is but three years, and already its exhibitions are comparing with those of like institutions in the older and more wealthy counties of the State. Others surpass it in respect to its financial condition and otherwise, but the interest taken by the industrious citizens of Ingham County in this enterprise is surpassed by none.

The Society dates its origin to the 29th December, 1853, at which time a large number of citizens from the several towns in the county assembled, (in pursuance of a previous call for a public meeting for that

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purpose,) at the Court House, in the village of Mason, at one o'clock P. M. The meeting was called to order by choosing the Hon. Ferris S. Fitch, Chairman, and O. M. Barnes Secretary.

The following resolution was presented by O. M. Barnes:

Resolved, That in the opinion of this meeting there should be organized an Ingham County Agricultural Society.

Which, after appropriate remarks from several gentlemen, was unanimously adopted.

On motion, it was

Resolved, That a committee of seven be appointed to prepare a draft of a Constitution and By-Laws.

Whereupon, Franklin LaRue, Ferris S. Fitch, H. A. Hawley, John M. French, O. M. Barnes, Wm. H. Chapman and Geo. B. Fuller, were appointed such committee.

On motion, it was

Resolved, That the meeting adjourn to meet at Mason, on Friday January 27th, 1854, at one o'clock P. M., and that the committee upon a Constitution and By-Laws be required to report at that time.

Thereupon the meeting adjourned.

The friends of agricultural improvement met in pursuance of the adjournment at the Court House in said county, at which meeting the committee appointed to prepare a draft of a Constitution and By-Laws through their chairman, Franklin LaRue, reported the following:

CONSTITUTION.

Article 1. This Society shall be called the Ingham County Agricultural Society.

Art. 2. Any person may become a member of this Society by signing the Constitution and paying one dollar into the Treasury; and may continue a member by paying annually thereafter the sum of one dol lar Life membership may be obtained on payment of ten dollars; and all certificates of membership shall include the family of the person to whom they are given. The officers elected on the organization of the Society, shall be considered members for one year.

Art. 3. The officers of the Society shall consist of a President, sixteen Vice Presidents, (one in each town in the County,) a Treasurer, a Secretary, and a Committee of five persons, who, together with the President and Secretary, shall constitute a Board of Directors of the Society;

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all to be elected by ballot, except at the first election, and to hold their offices for one year, and until others are chosen.

Art. 4. The duties of the officers shall be such as usually pertain to such officers, and as shall be prescribed by this Constitution and the By-Laws of the Society.

Art. 5. The annual meeting of the Society for the election of officers and transaction of other business, shall be held on the last Thursday of January, unless otherwise determined by the Board of Directors, and at such place as said Board shall appoint, they giving suitable notice thereof; and special meetings may be held upon the call of said Board.

Art. 6. The Society shall hold an Annual Fair and General Exhibition of Animals, Agricultural and Horticultural products, articles of Domestic Manufacture, of the Mechanic Arts, and also of such other matters as the Board of Directors shall determine; said Board to direct as to the time and place of holding said Fair, and the Premiums to be awarded, giving at least ninety days public notice of the same.

Art. 7. No premium shall be given to a person not a member of the Society.

Art. 8. Any vacancy in the offices of the Society may be temporarily filled by the Board of Directors.

Art. 9. It shall be the duty of the Board of Directors to adopt a code of By-Laws, and publish the same with the Constitution, for the use of the Society; and this Constitution and said By-Laws may be altered and amended at any regular meeting of the Society, by a majority of the members present.

Art. 10. It shall be the duty of the several officers to obtain the names of persons wishing to become members of the Society, and to solicit and pay over to the Treasurer all moneys received for membership, and as donations.

BY-LAWS.

Article I.

Sec. 1. Thirty days' notice shall be given by the Secretary of every meeting, by publishing notice thereof in such manner as the Board of Directors shall direct.

Sec. 2. Ten members shall constitute a quorum for the transaction of business.

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Article II.

Sec. 1. The following Standing Committees shall be appointed by the Board of Directors at their first meeting for the present year, and at every annual meeting for the election of officers, after the present year:

1. A Committee on Farms, Field Crops, and Agricultural Labor.
2. " Horses.
3. " Neat Cattle.
4. " Sheep.
5. " Swine.
6. " Farming Implements.
7. " Butter, Cheese, and Household Manufactures.
8. " Fruits and Garden Products.
9. " Mechanical Products.
10. " Noxious Insects.
11. " The improvement of Marsh Lands, and the introduction of grasses.

Sec. 2. The Committees shall discharge the duties pertaining to their respective departments, and such other duties as shall be assigned them by the Board of Directors.

Article III.

Sec. 1. Exhibitions shall be held under the direction of the Board of Directors at such times and places as they may direct, they having given due and particular notice of the same.

Sec. 2. The Board of Directors shall apportion prizes and premiums and adopt such regulations and conditions of competition as they may deem necessary.

Sec. 3. All articles exhibited must be accompanied with the name and residence of the producer.

Sec. 4. No person shall be allowed to exhibit anything for competition unless he be a member of the Society.

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Thereupon, on motion, the Society proceeded to elect officers for the ensuing year, which resulted in the following:

President—Hon. Ferris S. Fitch.

Secretary—Franklin LaRue.

Treasurer—Henry A. Hawley.

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Vice Presidents—Joseph Gale, Onondaga; Charles Jennings, Aurelius; Cobit Thompson, Delhi; Joseph North, Lansing; Sanford Marsh, Meridian; Joseph Davidson, Alaiedon; Kneeland Sweet, Vevay; Kaylam Covert, Leslie; Ezra Rumery, Bunker Hill; Samuel Crosman, Ingham; Alonzo Doane, Wheatfield; Lewis H. Lounsbury, Phelpstown; Josiah Baldwin, Locke; Henry Lee, LeRoy; Henry P. Atwood, White Oak; Royal Stephen, Stockbridge.

Directors—Amaziah Winchell, Ingham; Joseph L. Huntington, Vevay; George Beman, Wheatfield; Charles P. Bush, Lansing; Randolph W. Whipple, Ingham.

On motion, it was

Resolved, That it shall be the duty of the Board of Directors to publish in pamphlet form three hundred copies of the Proceedings, Constitution, and By-Laws of this Society, for the use of its members.

On motion, adjourned.

O. M. BARNES,
Secretary pro tem.

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The First Annual Fair of the Society was held at Mason, on Wednesday, the 10th day of October, 1855. Many inconveniences were of course experienced by the officers and others for the want of adequate grounds upon which to hold the Fair, sufficient buildings, track, &c., &c.; but, as a whole, the exhibition gave general and universal satisfaction to all. The address, delivered by the Hon. Geo. W. Peck, was listened to by a large crowd of citizens with marked attention and interest, and was delivered in his usual eloquent and happy style.

During the year 1856 the Executive Committee purchased a beautiful sight as the grounds of the Society, and obtained a perfect title to the same in fee, surrounded it with a substantial fence, fitted up a temporary ring, suitable stalls, a speaker's stand, &c. The fair of this year, which was held at the grounds of the Society, on Tuesday and Wednesday, the 14th and 15th days of October, was largely attended, and, on the whole, was quite as successful, financially and otherwise, as could have been expected. The annual address of this year was delivered by the Hon. John W. Longyear, of Lansing, and was peculiarly appropriate and befitting to the occasion.

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The following is a brief synopsis of the transactions of the Society for the year 1857:

ANNUAL MEETING.

The Annual Meeting of the Society for this year was held at the Court-House, in Mason, on the 29th day of January, 1857.

The following is the names of persons chosen as officers for the ensuing year, viz:

President—Huram Bristol, Esq.

Treasurer—Henry A. Hawley.

Secretary—Peter Low.

Directors—Minos McRoberts, James Fuller, Samuel S. Kadden, John W. Longyear, Geo. Beaman.

Vice Presidents—Wm. Blain, of Onondaga; Geo. B. Webb, Aurelius; A. D. Aldrich, Delhi; Mr. Davis, Lansing; Wm. H. Kelly, Meridian; Alexander Doby, Aleidon; Amadon Holden, Vevay; Wm. A. Dewey, Leslie; Dorman Felt, Bunker Hill; Amaziah Winchel, Ingham; David Gosline, Wheatfield; Geo. B. Fuller, Williamston; Chas. Waldo, Locke; Peter Dietz, LeRoy; Abram Hayner, White Oak; James Reeves, Stockbridge.

MEETING OF THE DIRECTORS.

The Annual Meeting of the Directors for 1857, was held at Mason, on Wednesday, July 22d.

Present—Huram Bristol, President; Minos McRoberts, James Fuller, Geo. Beaman, Directors, and Peter Low, Secretary.

On motion, the following Premium List was adopted for the Third Annual Fair, to be held at the grounds of the Society, on the 15th and 16th days of October, 1857, viz:

LIST OF PREMIUMS

To be awarded at the Third Annual Fair of the Ingham County Agricultural Society, to be held at the Grounds of the Society, in Mason, on Wednesday and Thursday, the 15th and 16th days of October next:

CLASS I.

Cattle.

Awarding Committee—Kneeland Sweet, of Lansing; Loren Sweet, of Vevay; John W. Seely, of Vevay; and Amaziah Winchel, of Ingham.

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Best bull 4 years old or over,	$4 00
2d " 4 " "	3 00
Best bull 3 "	3 00
2d " 3 "	2 00
Best bull 2 "	2 00
" 1 "	1 00
Best bull calf,	1 00
Best cow 4 years old or over,	4 00
2d " 4 " "	3 00
Best cow 3 "	3 00
Best heifer 2 years old,	2 00
2d " 2 "	1 00
Best heifer 1 year old,	1 00
2d " 1 "	Trans.
Best heifer calf,	1 00

2.—*Cross Blood or Natives.*

Committee and premiums same as on Blooded Cattle.

3.—*Working Oxen and Steers.*

Same committee.

Best yoke of working oxen,	$4 00
2d " "	3 00
Best yoke of 3 year olds,	2 00
2d " "	1 00
Best pair of 2 year old steers,	2 00
" 1 "	1 00
Best steer calves,	1 00
" fat ox or steer,	2 00
2d best "	1 00
Best cow or heifer,	2 00
2d " "	1 00

CLASS II.

Horses.

Awarding Committee—Jno. B. Taylor, Williamstown; Silas Alger, LeRoy; R. W. Whipple, Ingham.

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Best stallion 4 years old or over,	$5 00
2d " "	3 00
Best stallion 3 years old,	4 00
2d " "	2 00
Best stallion 2 years old,	2 00
2d " "	Trans.

2.—*Matched Horses.*

Best pair 4 years old or over,	$4 00
2d " "	2 00
Best pair 3 years old,	3 00
2d " "	Trans.

3.—*Single Horses for Carriage or Saddle.*

Best mare or gelding 4 years old or over,	$3 00
2d " " "	2 00
Best mare or gelding 3 years old,	2 00
2d " " "	Trans.

4.—*Brood Mares and Colts—Foal on foot, not over three years old.*

Best mare, 4 years old or over,	$4 00
2d best " " "	2 00
Best mare, 3 years old,	3 00
Best mare or gelding, 2 years old,	2 00
" " 1 year old,	1 00
Best sucking colt,	1 00
2d best "	Trans.

CLASS III.

Sheep.

Awarding Committee—John D. Reeves, Ingham; A. A. Kirby, Leslie; Miles Williams, Williamstown.

Best buck, 1 year old or over,	$2 00
2d best " " "	1 00
Best buck lamb,	1 00
2d best "	50
Best pen of ewes, not less than five, 2 years old or over,	3 00
2d best " " " " "	2 00

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Best pen of 5 ewes, 1 year old,	$3 00
2d best " " "	2 00
Best pen of 5 ewe lambs,	2 00
2d best " "	1 00

Natives and Cross.

Same Committee and Premium as on Fine Wool.

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CLASS IV.

Swine.

Awarding Committee—Henry Slaght, Onondaga; George Philips, Delhi; O. B. Stillman, Alaiedon.

Best boar,	$3 00
2d best "	1 50
Best sow,	3 00
2d best "	1 50
Best sow and litter of pigs not less than 4, 8 mos. old or under	3 00
2d best " " " " " " "	2 00

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CLASS V.

Poultry.

Awarding Committee—Geo. D. Pease and A. M. Chapin, Vevay.

Best coop of not less than 3, one cock and two hens,	$1 00
2d best " " " " "	50
Best coop of ducks,	50

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CLASS VI.

Farming Implements.

Awarding Committees—William F. Davis, Lansing; Geo. B. Fuller, Williamston; Joseph Gale, Onondaga.

Best plow,	$1 00
" farm wagon,	2 00
" ox cart,	1 00

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Best single buggy,	$2 00
" double carriage,	2 00
" sulky,	1 00
" harrow,	1 00
" seed planter,	1 00
" wheat drill,	2 00
" wheat cultivator,	2 00
" corn cultivator,	1 00
" straw and stalk cutter,	1 00
" roller for general use,	1 00
" grain cradle,	1 00
" horse rake,	1 00
" cider mill and press,	2 00
" grass seed sower,	1 00
" cheese press,	1 00

The committee will award suitable premiums for new and valuable implements.

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CLASS VII.

Mechanics.

Awarding Committee—F. S. Fitch, Bunker Hill; M. Elder, Vevay; Mr. Kelley, Meridian.

Best specimen marble work,	$1 00
" pair calf boots,	1 00
" pair kip boots,	1 00
" pair stoga boots,	1 00
" specimen cabinet work,	1 00
" " chairs,	1 00
" " edged tools,	1 00
" " cooper work,	1 00
" lot of tin ware,	1 00
" stove,	1 0
" specimen blacksmithing,	1 00
" ½ dozen brooms,	50
" ½ dozen calf skins,	1 00
" ½ dozen upper leather,	1 00

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Best set double harness,	$1 00
" set single harness,	75
" door,	1 00
" trunk,	50
" specimen window blinds,	1 00
" " sash,	1 00

CLASS VIII.

DOMESTIC MANUFACTURES.

Articles to be manufactured in the County.

Awarding Committee.—Andrew Hunt, Mrs. Hunt, Ingham; Mr. D. L. F. Branch, Stockbridge; J. L. Wheeler, Mason; Miss Elizabeth Stanton, Delhi.

Best 10 yards, all wool flannel,	$1 00
" " " for dresses,	1 00
" " carpet,	1 00
Best pair knit woolen stockings,	50
2d best " " "	25
Best pair knit or hooked gloves,	50
" " " mittens,	50
Best patch work quilt,	1 00
" " " by a girl under 12 years of age,	1 00
Best pair knit stockings, by a girl under 12 years of age,	50
Best specimen worsted work,	1 00
Best specimen silk embroidery,	1 00
" pair slippers,	1 00
" tidy,	50
" watch-case,	50
" coverlet,	1 50
" case millinery work,	1 00
" specimen needlework not mentioned above,	1 00
" lot of artificial flowers,	1 00
" " house-plants,	50

Discretionary Premiums will be allowed by this Committee for best crystal and other paintings.

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CLASS IX.

Butter, Cheese, Honey, &c.

Awarding Committee—Roswell Everett, Delhi; Chas. Jennings, Aurelius; Jos. Whitcomb, Wheatfield.

Best lot butter, 10 lbs. or over,	$2 00
2d best " " "	1 50
Best lot of cheese, 10 lbs. or over,	2 00
2d best " " "	1 50
Best lot honey, 10 lbs. or over,	1 00
" maple sugar, 10 lbs. or over,	1 00
Best one gal. molasses made from the Chinese sugar cane,	1 50
Best sample loaf bread,	50
" preserved fruits,	50

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CLASS X.

Fruits.

Awarding Committee—H. B. Shank, Lansing; John Clements, White Oak; Wm. Brown, LeRoy.

Best variety, 1 peck winter apples,	$1 00
" " fall apples,	1 00
" 12 pears,	1 00
" 1 peck peaches,	50
" ½ peck plums,	50
" 1 peck quinces,	50
Best collection grapes,	50

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CLASS XI.

Vegetables, Grain, Flour and Seeds.

Awarding Committee—A. D. Aldrich, Delhi; D. L. Cady, Vevay; John M. French, Aurelius.

Best ½ bushel winter wheat,	$1 00
" clover seed,	1 00
" timothy seed,	1 00
" field peas,	75

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Best ½ bushel beans,	$0 50
" oats,	50
" barley,	50
Best 12 ears dent corn,	50
" best variety of corn,	50
Best barrel flour,	1 00
Best and greatest variety of roots for feeding cattle,	2 00
" " " culinary vegetables,	2 00
Best peck tomatoes,	50
" potatoes,	50
" onions,	50
Best 6 heads cabbage,	50
" pumpkins,	50
" winter squashes,	50

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CLASS XII.

Field Crops.

Awarding Committee—Simeon Clay, Williamstown; Dorman Felt, Bunker Hill; James Sullivan, Locke.

Best field wheat, not less than 1 acre,	$3 00
" corn, " "	2 00
" oats, " "	1 50
" English grass, "	1 50
" clover, "	1 50
" potatoes, not less than ¼ acre,	1 00

A full statement of amount of crops, mode of cultivation, &c., must accompany a specimen of the crop satisfactory to the Committee.

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CLASS XIII.

Discretionary Premiums.

Awarding Committee—O. M. Barnes, Vevay; John N. Welch, Meridian; Lemuel Woodhouse, Leslie.

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FAIR FOR 1857.

The Fair for this year was held on the grounds of the Society, at Mason, on Wednesday and Thursday, the 15th and 16th days of October. Wednesday, the first day of the Fair, was devoted principally to the entry and arrangement of stock and other articles, designed for exhibition. At 10 o'clock on Thursday, the second day of the Fair, the Books of Entry were closed, and the several Viewing Committees entered upon the duties of their respective offices.

Notwithstanding the somewhat unfavorable season, the exhibition of Grain was all that was or could have been expected; and that of Vegetables, (especially potatoes, turnips, &c.,) could hardly have been better. The exhibition of Stock was in all respects honorable to the Society.

The Fair upon both days was largely attended by citizens from all parts of the county, as well as adjoining counties.

At 3 o'clock, the Annual Address was delivered from the stand by O. M. Barnes, Esq., a copy of which address is herewith transmitted to you for publication.

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LIST OF PREMIUMS

Awarded at the third Annual Fair of the Ingham County Agricultural Society, held at the grounds of the Society at Mason, on Wednesday and Thursday, the 15th and 16th days of October, 1857.

CLASS I.—CATTLE.

Blooded Cattle.

Best bull 4 years old or over,	Wm. Cook,	$4 00
" 3 "	H. Sayres,	3 00
2d " "	James Barnard,	2 00
Best bull 1 year old,	D. L. Cady,	1 00
Best bull calf,	John Farmer,	1 00
Best cow 4 years old or over,	D. L. Cady,	4 00
Best heifer 1 year old,	D. L. Cady,	1 00
2d " " "		Trans.
2d best calf,	D. L. Cady,	1 00

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2.—*Cross of Blood.*

Best bull 4 years old or over, R. W. Whipple,	$4 00
" 2 years old, A. L. Clark,	2 00
" 1 year old, A. Y. Olds,	1 00
" calf, M. McRoberts,	1 00
Best cow 4 years old or over, R. R. Low,	4 00
2d " 4 " " Daniel Searl,	3 00
Best cow 3 years old, J. Coatsworth,	3 00
" 2 years old, Chas. Holbrook,	2 00
2d best cow, 2 years old, Wm. H. Child,	1 00

3.—*Working Oxen.*

Best yoke working oxen, A. D. Aldrich,	$4 00
2d best " " Wm. Tubbs,	3 00
Best yoke steers 3 years old, A. D. Aldrich,	2 00
2d best " 3 " Wm. Smalley,	1 00
Best yoke steers 2 years old, A. H. Whipple,	2 00
2d best " 2 years old, Calvin Ketchum,	1 00
Best fat ox or steer, Samuel Swartwout,	2 00
2d best fat ox or steer, Geo. B. Webb,	1 00
Best fat cow or heifer, "	2 00

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CLASS II.

Horses.

Best stallion 4 years old or over, Isaac Mosley,	$5 00
2d best " 4 " Whitney Smith,	3 00
Best stallion 3 years old, Geo. Beeman,	4 00
2d best " 3 " H. Everett,	2 00
Best stallion 2 years old, Roswell Everett,	2 00

2.—*Matched Horses.*

Best pair matched horses, Wm. Page,	4 00
2d best " " M. Elder,	2 00
Best pair matched horses 3 years old, Whitney Smith,	3 00
2d best " " 3 years old, W. A. Dewey,	Trans.

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3.—*Single Horses.*

Best single horse, J. Coatsworth,	$3 00
2d best " G. H. Strickland,	2 00

4.—*Blood Mares and Colts.*

Best blood mare and colt, H. Norton,	4 00
2d best " " E. Hammond,	2 00
Best 3 year old gelding, J. A. Story,	3 00
2d best 3 year old mare, S. Rolf,	1 00
Best 2 year old gelding, A. Holden,	2 00
" 1 " " R. H. Davis,	1 00
Best sucking colt, H. Norton,	1 00
2d best " E. Hammond,	Trans.

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CLASS III.

Sheep.

Best buck, H. B. Hawley,	$2 00
2d best buck, Wm. F. Near,	1 00
Best buck lamb, H. A. Hawley,	1 00
2d best " Whitney Smith,	50
Best pen ewes, H. A. Hawley,	3 00
" 5 lambs, " "	2 00

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CLASS IV.

Hogs.

Best bore, A. Holden,	$3 00
" sow and pigs, A. Holden,	3 00

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CLASS V.

Fowls.

Best cock and two hens, J. W. Post,	$1 00
2d best " " A. M. Chapin,	50
Best coop ducks, John Q. Thompson,	50
Best peacock, Geo. Philips,	Trans.

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CLASS VI.

Farming Implements.

Best plough, J. H. & J. Beach,	$1 00
" farm wagon, Phiney & Tobias,	2 00
" wheat cultivator or gang plough, J. H. & J. Beach,	2 00
" " roller, H. A. Hawley,	1 00
" grain cradle, R. P. Walker,	1 00
" cheese press, Geo. B. Webb,	1 00
" single buggy, Ira O. Darling,	2 00
" horse rake, E. Northrop,	1 00

CLASS VII.

Mechanics.

Best grain seed sower, A. Y. Olds,	$1 00
" fanning mill, G. P. Adams,	1 00
" straw and stalk cutter, D. Felt,	1 00
" set double harness, C. H. Rea,	1 00
" " single " "	75

CLASS VIII.

Domestic Manufactures.

Best 10 yards wool flannel, A. Holden,	$1 00
" 10 yards carpet, J. W. Seely,	1 00
" pair knit wool stockings, Mrs. A. Hunt,	50
2d best " " Mrs. L. F. Olds,	25
Best pair knit gloves, Mrs. W. F. Near,	50
" " mittens, Mrs. A. Hunt,	50
" patch work quilt, Mrs. H. T. Allen,	1 00
" " " by a girl under 12 years of age, Miss Everett,	1 00
	1 00
" pair of wool stockings, by a girl under 12 years of age, Miss Hunt,	50
" specimen of worsted work, Mrs. M. Elder,	1 00
" silk embroidery, Miss Margaret Griffin,	1 00
" pair slippers, " " "	1 00

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Best tidy, Mrs. J. Polhemus,	$0 50
" coverlet, Mrs. W. Wheaton,	1 50
" case millinery work, Mrs. J. S. Griffin	1 00
" specimen needle work, Mrs. H. Swan,	1 00
" lot artificial flowers, Mrs. A. Parker,	1 00
" lot house plants, E. Northrop,	50
" embroidered collar, Mrs. W. Wheaton,	50
" oriental painting, Mrs. A. Hayward,	50
" oil painting, Miss H. K. Clapp,	1 00
" pencilings, Miss H. K. Clapp,	50
" Grecian painting, Miss A. Barnes,	50
" bouquet flowers, Miss A. Parker,	50
" hair work, Mrs. A. Hayward,	50
" single quilt, M. K. North,	

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CLASS IX.

Butter, Cheese and Honey.

Best lot of butter, Mrs. Geo. B. Webb,	$2 00
2dbest " " Mrs. Wm. Horton,	1 50
Best lot of cheese, Mrs. J. D. Reeves,	2 00
2d best " Miss M. Griffin,	1 50
Best lot of Honey, D. L. Crossman,	1 00
Best lot of maple sugar, T. Rockwell,	1 00
Best sample loaf bread, Mrs. A. Holden,	50
Best lot currant wine, H. B. Shank,	1 00

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CLASS X.

Fruits.

Best variety winter apples, A. M. Chapin,	$1 00
" fall " Henry Slaght,	1 00
Best 12 pears, Daniel Johnson,	1 00
Best peck peaches, A. M. Chapin,	50
" quinces, Geo. B. Webb,	50
Best collection of grapes, E. Rumery,	50

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CLASS XI.

Vegetables, Grain, Flour and Seeds.

Best ½ bush. winter wheat, Geo. Phillips,	$1 00
" ½ " clover seed, Wm. Blain,	1 00
" ½ " timothy seed, E. Northrop,	1 00
" ½ " field peas, J. Q. Thompson,	1 00
" ½ " beans, "	50
" ½ " oats, Geo. D. Pease,	50
" ½ " barley, Wm. Blain,	50
" 12 ears dent corn, Thos. Field,	50
" variety of corn, John A. Barnes,	50
" and greatest variety of roots, M. Sanders,	2 00
" " " vegetables, Geo. B. Webb,	2 00
" peck tomatoes, A. M. Chapin,	50
" peck potatoes, J. W. Seeley,	50
" peck onions, Alvin Rose,	50
" 6 head cabbage, Geo. M. Smith,	50
" 6 pumpkins, Geo. D. Pease,	50
" 6 winter squashes, H. B. Fuller,	50

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CLASS XII.

Field Crops.

Best acre of wheat, R. F. Griffin,	$3 00
" corn, "	2 00

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CLASS XIII.

Discretionary Premiums.

Two beautiful model gates, Calvin Ketchum,	$1 00
" " " " Wm. B. Coffin,	75
Fine fat pig, C. H. Rea,	50
Beautiful specimen of buckwheat, H. Slaght,	50
" " barley, "	50
Patent churn, James Reeves,	75
" J. Haddin,	1 00

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Bee hive, A. M. Chapin,	$1 00
Bermuda potatoes, A. M. Chapin,	50
Peas and pumpkins, "	50
Peas, Wm. Tubbs,	50
Cauliflower, W. Sanders,	50

ANNUAL REPORT OF EXECUTIVE COMMITTEE FOR 1857.

The Executive Committee would respectfully state, that owing to the uncertain and gloomy prospects the last season, they were induced to curtail the Premium List for 1857. But now, believing it was an error, recommend an enlarged Premium List for 1858, and that it be made as early as practicable. Much inconvenience was also experienced in not having a suitable building for the exhibition of fancy and other articles, and recommend to the Society the propriety and necessity of erecting a building for the purpose, the ensuing year.

After the last Annual Fair the committee let a job for the completion of the circle for the exhibition of horses. This job was let to Thomas Clough, for $155. It is now two-thirds done, and will be finished early in the spring. Upon this job the treasurer has paid $100, and the balance we confidently hope will be raised by private enterprise.

P. LOW, *Secretary.*

TREASURER'S REPORT FOR 1857.

The Treasurer of the Ingham County Agricultural Society, begs leave to make the following report:

Receipts.

Amount received from former Treasurer,		$ 18 34
" " for membership for 1857,		227 00
" " for gate fees, (at fair,)		130 65
" " of treasurer of Ingham county,		73 12
Total amount received,		$449 11

Disbursements.

Paid O. Griffin, for labor on Fair Ground,	$ 5 00	
" Mason steam mill Co., for lumber,	10 40	
" Hosmer & Kerr, for printing,	12 00	

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Paid Phelps & Co., for lumber and hardware,	$11	37	
" M. C. Bowdish, for labor,	6	50	
" Assistant Clerk, (during Fair,)	3	00	
" gate tenders,	8	60	
" marshals and night police,	10	75	
" P. Low, Secretary,	7	00	
" H. Bristol, service and work,	8	00	
" H. A. Hawley, " "	8	00	
Total for expenses,	$90	02	
Paid premiums for 1857,	187	25	
" on job to Thomas Clough,	100	00	
" premiums allowed in 1856,	13	25	
			390 52
Balance remaining in the treasury,			$58 59

Liabilities.

There is yet due to J. Wrightman, for services,	$6 00
Due on Premium List for 1856,	6 00
" " " 1857,	11 75
Total liabilities,	$23 75

From the foregoing financial exhibit, it will be seen that the Ingham County Society (although it is at present obliged to exhibit a somewhat meagre premium list,) is pursuing that course of policy usually deemed the wisest and most beneficial not only to individuals but to individual corporations, to keep the balance (if any) in favor of the treasury; while the Executive Committees have pursued this policy from the organization of the Society to the present time, the progress which it has made during the three years of its existence, is unsurpassed by but few of its sister counties.

The grounds of the Society are situated half a mile south of the pleasant village of Mason, adjacent to a fine stream of pure water, and contains about five acres of ground. It seems as if nature, in constructing this location, had designed it for the identical purpose for which it is now appropriated. The new circle for the exhibition of horses is located near the rear of the grounds, and surrounds a beautiful mound which rises gradually from every part of the track to the

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center of the ring. On the east side of the ring, and still further to the rear of the grounds, the ground rises gradually from the track about fifty feet, and at an angle of about thirty degrees from the horizon; thus furnishing a comfortable place and a fine prospect for almost a countless number of spectators.

Since the last fair of 1857, the Executive Committee have expended about $200 in grading and fitting up the ring, and anticipate, when the same is fully completed, to be able to furnish to the members of the Society, as good an opportunity for the exhibition of horses and horses and carriages as they can well desire.

I prepare and transmit to you this statement at the special instance of the Ex-Secretary, as the same was not transmitted during his term of office.

Dated Mason, Aug. 2d, 1858.

H. BRISTOL, *President.*

GEO. M. HUNTINGTON, *Sec. for* '58.

ADDRESS

Delivered by O. M. BARNES, Esq., *before the Ingham County Agricultural Society, at its Annual Fair, October* 16, 1857.

Mr. President and Gentlemen:—

The scene presented by this exhibition is highly honorable to our county. Twenty years ago Ingham county was an untouched wilderness. Behold the change! It is now one of the first counties of the State. Everywhere you now go you find the field and the farm house. Forests are fast disappearing. What being has been at work here to produce this change of scene? Who has been making this conquest over nature's wilderness? An army has indeed invaded this region, and has changed all its former aspect—but not to desolation and ruin. That great, restless army of American free laborers has sent a division into this place also, armed with axes and plows, instead of swords and bayonets, and this is the work of that invasion; and to day these bold invaders have come up here with their *spoils* and their trophies of victory.

Agriculture is the most natural occupation of man;—hence it is tha every one who has much of nature in him has his heart more or less

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upon it, and desires sooner or later in life to participate in its pursuits and its pleasures. These have an ennobling effect on the mind. This is proven as well from the character of those pursuits, which constantly bring the individual in contact with nature and its great author, as from the history of the world. Most of the great men of all ages have been reared up in the rural districts. In our own time—our Washington, our Clay, our Jackson, our Jefferson, our Webster, have all been farmers. In the days of Roman prosperity and greatness, her great men came from the country; her scholars, her generals, her orators and statesmen, all delighted in rural pursuits. Cincinnatus, you recollect, left his plow in the hour of Rome's peril, to save his country from ruin, and to lead her armies to victory. Virgil wrote his immortal poems, many of which are devoted to agriculture, upon his little farm. Cicero and Cato delighted to leave the business of the State and participate in the pursuits of husbandry. What can be more beautiful than the language which Cicero puts into the mouth of Cato in his treatise concerning old age. He says:

"I come now to the pursuits of husbandry, in which I vast delight. They are not interrupted by old age, and they seem to me to be pursuits in which a wise man's life should be spent. The earth does not rebel against authority; it never gives back, but with usury, what it receives. The gains of husbandry are not what exclusively commends it. I am charmed with the nature and productive virtues of the soil. Can those old men be called unhappy who delight in the cultivation of the soil? In my opinion, there can be no happier life; not only because the tillage of the earth is salutary to all, but from the pleasure it yields. Nothing can be more profitable, nothing more beautiful than a well cultivated farm."

This is the opinion which the greatest of Roman statesmen and most distinguished of orators had of the pursuits of agriculture.

Not only is it the most pleasurable and natural occupation; it is also the most important, because it is the support of every man and every other pursuit. It is the agriculturist that feeds and clothes the world. In a moral point of view its importance is the same. The world has advanced or receded in civilization just in proportion as husbandry has been honored or disgraced. The first step in all civilization is for the barbarian to learn to cultivate the soil; and the first step of

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an enlightened nation towards degeneracy and despotism, is the disgracing and abandoning of agriculture. Such has been the history of mankind. They never become civilized till they become husbandmen; and they never loose civilization or liberty so long as they appreciate or attend to the cultivation of the earth; and if this country ever looses its civilization or its liberty, it will not be till after it has altered the tenure of our lands, changed the character of the farmer, and disgraced the tiller of the soil.

These being our views of agriculture, the question presents itself, How can it be made still more honorable and profitable? I have not the time, even if I had the knowledge, to give a detailed answer. A consideration of a few principles and results is all that can be at present attempted.

In all our plans for improvement, we must have reference as well to the tiller's moral improvement as to the gross productiveness of the country. We want, especially in this free country, such a system as shall promote the growth of manly virtues in the tiller, as well as abundance of production; and any system which attains the latter result, at the expense or detriment of the former, is unfit for a free people.

Nor must individual prosperity be lost sight of in efforts to increase the gross surplus productiveness of our country. Some countries are made to yield a surplus in consequence of the tillers being deprived of much really necessary for their own comfort. Our object is to make our farmers comfortable, independent and intelligent men, and make our country yield a gross surplus also. Individual and national prosperity are indeed identical; and national prosperity is but the aggregate of individual prosperities.

What state of things, then, is most favorable to our national and individual prosperity in agriculture? A division of the land into farms in such a manner as to make the tillers also the owners of the soil they cultivate, is among the most important. In this respect the farmers of the United States have a very great advantage over those of all other nations. With us, they generally own the land they cultivate, and such is the policy of our laws and the genius of our institutions, that the land is divided up into myriads of farms, owned in fee simple by the cultivator himself. Here we differ widely from Europe, even. Our

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land is tilled by owners—theirs by tenants. The American cultivator is a land owner—the European cultivator is a mere tenant. Even in England the land is owned by one class of persons, and tilled by another and entirely different class, who have no permanent interest in it; and such is the policy of her institutions, and the tendency of her laws of descent and entails, that this state of things is continued from age to age, and the ownership of the land is thus prevented from falling into the hands of those who cultivate it. Now whatever may be said of the gross production of a country thus situated, the effects on the agriculturist are apparent.

1st. Under such a state of things the tiller has no such spirit of independence as when he is the owner of the land he tills. He is in a great measure the subject of his landlord; so much so, that in Russia the tenant is deemed an appurtenant of the soil, and goes with it on sale. There, the landlord, if he sells, transfers the soil, but *throws in the tenants in the bargain.* It is easy to see that manly virtues cannot exist or thrive in such bosoms or under such circumstances.

2d. It takes from the tenant all incentive to make permanent improvements or provision for the future. His object is, in general, to obtain the most present profit from the land, without reference to the condition he leaves it in.

3d. He has, as it were, no home of his own; and, as love of country is but a form or modification of the love of home, and as home is the parent and support of almost every virtue, it follows, as a matter of course, that *tenants*, generally, are by no means the citizens that *independant farmers* are.

Such a system of Agriculture, therefore, even if it would increase the gross surplus productions of our country, is to be avoided by independent America. We require—every free country requires—a system of farming which shall not only result in the production of fine crops, and fine cattle, and fine farms, but also which shall tend to develop independent and high minded farmers. To this end it is essential that as far as possible the man who cultivates the land should own it. For the attainment of this object in the United States, the laws of our European ancestors, which were calculated to tie up the title to lands, and prevent its being owned by the farmer himself, have been abolished. The old feudal tenures, the doctrine of primogeniture, of entails and family settlements, are almost if not entirely eradicated; and to promote the ap

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portionment of the land among the laborers, we have pre-emption laws, and homestead laws, and the like; and in general, that system of laws which secures *fee simple* home to the greatest number, makes the State most powerful and independent, and its citizens most virtuous, intelligent and free; and this condition of our lands is believed to be the most favorable to the general development of our country. Immediately after the French revolution of 1794, many districts in France, which had been before owned by large landlords, and tilled by a tenantry, was divided up into small farms, which the tiller owned as well as tilled. It was found that the gross production under this system was many times greater than it was under the old system of large farms and tenantries.

The objection made to this state of things, because it tends to multiply the number and lessen the size of farms, is certainly not sound. There is no error more common than to suppose a man's profits are in proportion to the number of acres he tills. A small farm well tilled produces more profit than a large one illy or ignorantly cultivated. It is better for the farmer, because the amount of capital in the small farm is less; because the labor is then generally better applied, and produces more; and because the gross production in such case bears the greatest proportion to the capital invested, and labor applied. It is better for the country, not only for these reasons, but also because homesteads are thus made more numerous in the country, and thereby furnish greater facilities for improvement, for schools, churches, and all the institutions of civilization.

Our agrarian laws are therefore most favorable to the greatness and superiority of farming interests. They tend to elevate, while those of most other nations tend to depress the man who toils. So much for our laws.

The next question to be considered is, how can the farmer increase the production of his farm?

And here it is necessary to look back over the history of the past, to see how agriculture has been brought to its present position, as we may thereby know how to judge of and direct the future.

When man first went forth upon the earth to earn his bread by the sweat of his brow, he went forth, we may suppose, with naked hands and an uninformed mind. He was destitute of implements and without knowledge. The spontaneous productions of the earth for a time

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supplied his wants. But these, as circumstances changed and numbers increased, were found to be insufficient. Necessity required, experience suggested, and man's ingenuity devised improvements. By degrees rude implements for taking game and tilling the ground, were created, and modes of domesticating and rearing animals were discovered. The improvements made and the knowledge acquired by one generation of men were handed down to their descendants and increased and improved by them, till the race has become what we see it to-day. From being a man with naked hands he has discovered the properties of nature and rendered them subservient to his wants; he has discovered the laws of mechanics and has created myriads of machines to labor for him; he has captured and hammered to the car of improvement the various elements of nature—the water, the air, the electricity, in the various states and modifications.

And how has all this been done? It has been accomplished by knowledge and industry. Mere industry, however, without knowledge to direct can do but little. It is knowledge that has accomplished all these things. It has been Aaron's rod with which mankind has smitten the Rock of Nature and caused it to send forth its streams of hidden treasures for the gratification of our race. That, "knowledge is power" is no where more true than in farming. I believe there is not a spot on earth scarcely, which, with the requisite knowledge, cannot be made to yield for the support of man. Knowledge is power not over mind alone—it is power over the elements of nature in a special manner; it is power over the water, which, in its natural state and in the form of steam, is made to impel all forms of machinery; it is power over the viewless wind which is made to waft our ships over every sea; it is power over the mysterious electricity that it makes to carry messages more fleet than the flight of time; it is power over matter, by a knowledge of the laws of which, the mechanic is enabled to combine machinery, and it is power over the productive properties of the earth, whereby it can be made to yield for man's support. Here, then, is the source from whence improvement has come, and here is the source from which future improvement must be derived.

And why is it that farming pays so much better to-day than it did three thousand years ago? Why is it that one man with the teams and implements of to-day, can raise ten times as much produce in a given time, as one could three thousand years ago? Is it because he is

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stronger now than then? No. Is it because he is more industrious? No. It is because he has the accumulated experience of centuries and understands the science of agriculture better.

To some extent, man's power over the productive properties of the earth depends on his physical capacity to toil—to a greater extent, perhaps, on his industry—but to a still greater extent upon his knowledge and intelligence. Indeed, without the last, physical strength and even industry are almost vain.

As, therefore, our knowledge of the science of Agriculture becomes more extensive and more general, so will the products and profits of farming be increased. Agricultural science is, however, in its infancy. It was not till the commencement of this present century that any attempt was made to reduce the rules and principles of farming to system; and since such has been the case, agricultural labor, intelligently conducted, has been made to pay more than double what it did before. But as yet, in this country, far too little attention has been paid to this science. And why is this? There is no science that has a more intimate connection with our prosperity. None more naturally interesting. Indeed, a thorough education is, if possible, more beneficial to the agriculturist, than to the doctor or lawyer. There is no occupation where it yields more pleasure or a better reward.

For ages the human family, even after they were enlightened, saw the earth produce the various articles of food, clothing and shelter, without any scientific inquiry in regard to the properties of soils or the growth of vegetation,—without even asking what it was that formed the nutriment of plants. There ought to be more general attention given to this subject. There ought to be appropriate text books on the science of Agriculture, and they ought to be studied in our district schools just as much as arithmetic, grammar or geography; and no time spent by the farmer's son would bring a richer return than that devoted to this subject.

But I hasten to mention some particulars necessary to our growth in farming:

1st. We need a better understanding of the best modes of subjugating soils and of clearing off, fencing and draining land. It cannot be doubted but that much time and expense is annually thrown away by reason of our imperfect knowledge of these operations, while an immense profit is lost which might be realized if these operations were

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better understood and executed. Drainage, especially, is deserving of attention. The experience of those who have tried it, proves that a vast amount might be added to the profits of the farm by judicious drainage.

2d. We need a better and more general acquaintance with the best plans and styles of homesteads and farm buildings. Convenience and advantage are, perhaps, the first things to be attended to in the construction of a rural homestead. How many ill-planned and badly-located dwellings there are among our farmers. Sometimes it would really seem that convenience and fitness were despised by the builder. How many hours of weary toil, especially to the female members of the family, might be saved by a better planned, better constructed, and better located house. How much money and how much health might be thus saved. Fitness and beauty of appearance in the farmer's homestead are also of great importance. Nature is lavish of her beauties about his home, and should not his house be in keeping, and be as attractive and inviting as any. Should not the farmer's wife and daughter have homes as neat and beautiful as any? and are not they as able to adorn them? We need, also,

3d. An acquaintance with the constituent elements of plants, particularly those that constitute farm crops, and the conditions of air, earth and water, that are most favorable to their growth and perfection.

4th. A better acquaintance with the properties of soils and manures, and the best modes of fitting the one and applying the other, in order to insure the greatest available supply of the food of plants.

5th. An acquaintance with the best kinds and breeds of domestic animals, and the modes of raising and improving them. When good breeds of animals will be highly profitable, and poor breeds, or kinds' be nothing but a bill of expense, it must be of consequence to know which are good and which not.

6th. The farmer needs, also, to know all that can be learned as to the kinds and habits of noxious insects and worms, so that he may, so far as possible, protect his orchard and field from their destructive depredations. It may be that no knowledge or foresight will be sufficient to enable us to wholly avoid these insidious and most destructive depredators; yet much profitable information can be obtained on this point and thereby much of their depredations be avoided.

7th. The machinery necessary for the farm, and a knowledge of the

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laws of mechanics, so as to be able to work and apply machinery successfully, and to judge of its merits correctly, are also of great consequence to the farmer.

8th. The farmer should know, as far as possible, how to apply labor most opportunely and fittingly. Some persons merely *stay* on farms, and do not seem to work at all. Of course they do not succeed. Other men do their work too soon, and therefore fail. Others still are forever too late with their work, and therefore fail. It is of the utmost consequence that everything on the farm should be done "*decently and in order.*"

9th. Added to all these, the farmer needs more than any other part of the community, a channel of commerce; a means of getting his products to market in the cheapest possible manner. The wheat buyer can and does allow just as much for profit on the wheat he purchases when the means of communication are bad as when they are good. It is of no account to him whether your wheat goes over railroad, *mud* road, or by water. He must have his profits, and the expense of transportation he deducts out of the price, so that it comes out of the farmer.

The merchant must charge us just as much profit on the goods we buy of him, whether the transportation cost more or less. I trust the farmers of Ingham county, so rich in all the elements of prosperity, will not be slow to secure to themselves such means of railroad communication as shall make their goods cost them less, and their wheat bring them more.

I ought not to omit to mention a revolution now transpiring in the means of communication that is to have, and is having, a vast influence upon the agricultural, as well as the other interests of the interior portion of our country. There are many of those who hear me that can well recollect, indeed I can almost recollect it, when water formed the only efficient channel of commerce. Those who lived away from water communication labored under every disadvantage. But the railroad has been since constructed, and by its means a great revolution is being effected—a revolution silent and bloodless it is true, but equal in importance to any which the race has ever witnessed. Heretofore, civilization, wealth and refinement, were only found bordering on water communications. This is proven by the history of Egypt, Greece, Rome, Great Britain, and indeed by the history of civilization throughout the world. But we live in the era of railroads. Commerce and

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travel are now passing from the water to the land. Water has ceased to be the only means of communication. The railroad is becoming the equal, if not the preferred mode. The genius of commerce is no longer balked by the appearance of terra firma; but, as occasion requires, she takes to the land with equal facility, and greater speed, and hurrying on, clothed in the bright robes of civilization and refinement, she bestows her smiles, and scatters her blessings, over every corner, and into the most interior recesses of the continent. The sea-port and the seaboard have no longer so great advantage over the interior. Now the inhabitant of the interior, cheapness and fertility of soil, and everything considered, is as well situated as the farmer near New York. The effect of this revolution on the general development of the world is beyond computation. The railroad is a great republican, a great equalizer of the wealth, and the comforts, and civilization of the world. The interior is now possessed of a means of progress never before enjoyed. This is the great revolution.

It is proper also to remark, that there is no ground for jealousy between agriculture and the other industrial pursuits—commerce, manufactures, and the mechanic arts. The prosperity of one promotes the prosperity of the others. Commerce, the arts and manufuctures, all lean on agriculture for support; and, in turn, agriculture is supported by them all. They are all kindred callings—sister arts. In the civilization and regeneration of the earth, they march hand in hand; but agriculture is the elder sister, and the others lean upon her for support.

But it will be asked how are these improvements to be made? How is the farmer to secure the advantages of improved agriculture? It is not expected that anything will obviate the necessity of labor and industry. Without these nothing can be accomplished, and no great good can be obtained without great labor. Improvement, if obtained at all, can only be had through great labor.

Much improvement may be made by observing and imitating the culture of those farmers who succeed best, and much by means of agricultural fairs. Farming has much improved since their introduction. But a more important means of improvement are Agricultural Books. These are really as useful to the farmer as the lawyer's or doctor's books are to him, and no farmer should be without them.

I have already said that the science of agriculture should be a part of the studies taught in the common school. The Agricultural College

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now furnishes to the farmer's son a means of perfecting his education not heretofore enjoyed, the good effects of which it is hoped may soon be een in the bettered condition of our rural districts.

But, then, we shall be asked, will all this pay? Will the improved system of culture pay any better in proportion to the expense? If it does not, it is surely no real improvement.

I presume no one will deny but that it is far more honorable and satisfactory to the farmer to understand his business, to know the reasons, the causes and the effects of the various operations of agriculture; and cannot the farmer just as well as any one, derive pleasure from the pursuits of science? His facilities for such pursuits are pre-eminent, while his avocation furnishes him opportunity to turn all his knowledge to profitable account. He is in daily contact with nature, and more than other men witnesses her wonderful and mysterious operations; operations which, however, require the aid of science to perceive and appreciate. It will pay them so far as intellectual pleasure is concerned. But will it pay in dollars and cents? Does the labor of an intelligent farmer of to-day pay any better than that of a farmer of one thousand or one hundred years ago? Yes, and why? Because implements and machinery have been introduced, and agriculture is now better understood. Then may we not conclude that improvement in our present implements, addition to our knowledge of the subject, and a better performance of the labor of tillage, will also increase the profits of our farming?

In England and Germany the annual produce of the farm, per acre, has been more than doubled within the last thirty years. There is no reason why ours may not do so also.

Suppose any farmer among you to have eighty acres of land, and that he devotes himself to the raising of grain, cattle and sheep, in which he has the usual present success. His wheat yields about fifteen bushels per acre, his sheep about three pounds of wool per head, and his oxen, at the age of five years, bring him about $40 a head. This, so far as I can ascertain, is about the average. His eight acres of wheat produce one hundred and twenty bushels, which, at $1 per bushel, is $120. The cost of production, aside from interest on the value of the land, is about $60; which leaves a profit of $60.

Now let us see what might have been raised on this same eight acres. From the Annual Report of the State Agricultural Society for

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1853, it appears Linus Cone, of Troy, Oakland county, raises, on an average, on his farm, thirty-six bnshels of wheat per acre, and eighty-one bushels of shelled corn per acre. The farm of Mr. Green, it appears from the same Report, yielded, under ordinary tillage, fifteen bushels of wheat per acre—in which case the land was plowed only five inches deep. The same land, under better cultivation, and when plowed ten inches deep, produced thirty bushels per acre, on an average. Suppose our farmers, by a better understanding and practice of farming, succeed in raising an average of thirty bushels of wheat per acre only, undoubtedly he might do better. His eight acres then yields two hundred and forty bushels. Suppose the increased expense be $2 per acre, making the cost of production $76, aside from interest on the value of the land. At $1 per bushel, his crop now brings $240—which leaves $164 profit, instead of $60 profit, being $104 more profit than formerly. So much he has for his better understanding and practice of farming. In the latter case, the profits are nearly three times as great as formerly. Does it not pay then?

Thirty sheep, at three pounds of wool per head, will yield ninety pounds, which, at 30 cents per pound, brings $27; and if the increase be twenty lambs, worth 75 cents per head, it will add to the value of the product of the flock $15. Now, good breeds of sheep, well cared for, will yield at least five pounds of wool per head, and that of a quality which will bring 35 cents per pound as readily as the former kind will 30 cents, and the lambs bring $1 per head more readily than those of the poorer flock 75 cents. The yield of the improved flock is then $52 50 in wool, and $20 in increase—being $72 50 in all. If the cost of keeping the flock be each $30 annually, the annual profit from the one flock is $12, and from the other $42 50. That is, the improved flock yields three and a half times as much profit as the ordinary flock.

So as to cattle. By taking care to get good breeds, and to raise with pains, the farmer can, with a very little if any more expense, produce oxen worth $70 per head instead of $40. Now if it cost $25 per head to raise the poorer class of oxen, and $30 per head to raise the better class, the profit in the one case is $15, and in the latter case $40 per head. The one system of farming then yields, on the thirty sheep, a yoke of oxen, and eight acres of wheat, a profit of $102 annually,

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and the other and more improved system, on the same products, yields a profit of $286 50, or nearly three times as much as the other.

Let it never be forgotten, too, that every dollar added to any product over and above the cost of production, is profit. Thus, if one farmer raise thirteen bushels of wheat per acre and another eighteen bushels per acre, many will say the one is just five bushels per acre the best off. But you must remember that the first eight bushels raised on every acre goes to pay the cost of tillage. The one has, therefore, five and the other ten bushels profit per acre. Is it any wonder, then, that while one farmer makes nothing on his farm, another, with no better natural facilities, grows rapidly rich. Every eighty acre farm in Ingham county has a mine of wealth within it, and good farming will bring it out. There are many farms in this State of no more than eighty acres that now yield an annual profit, over and above all expense of living, cultivation, and interest on the capital invested, of from $500 to $1,000. It must be apparent, then, that every owner of even a small farm, if he will bring to its cultivation a thorough knowledge of his business, and good industrious habits, is sure to become well off, if not wealthy.

But the improvement of Agriculture has not for its sole object an increase of wealth. Its object is not merely to make the farmers more numerous and more wealthy. It is also to make us as a nation more generally intelligent, more virtuous, more powerful and more free. The American farmer is the American freeman—the sovereign of the soil he tills. He may be called—he is called—to the Representative Hall, the Cabinet, and the Executive Chair. To improve the intelligence of the farmer, therefore, is not merely to increase his power over the productive properties of his farm. It is also to make him the better citizen, and the happier and nobler man. In the farmers hands, more than in any others, rest the destinies of this country. While, therefore, we glory in the fact that the American farmer occupies a position of unparallelled prosperity and independence, let us never forget that not only the profits of his farm, but also the destinies of this country, depend upon his virtue and intelligence.

IONIA COUNTY.

No report received.

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JACKSON COUNTY.

OFFICE JACKSON CO. AGR'L SOCIETY,
Jackson, Aug. 16, 1857.

R. F. JOHNSTONE, ESQ.,

Secretary Mich. State Agricultural Society:

SIR—Herewith I send you the Annual Report of our transactions for 1857, together with the proceedings at our Annual Meeting in 1858.

J. H. HUBBELL,
Secretary.

ANNUAL REPORT.

The Executive Committee would respectfully report that the last year has been one of prosperity to the Society.

Since its organization in 1853, our Fairs have each year steadily increased in the number of entries, the interest taken in the exhibitions, the number of persons in attendance, as well as in the amount of cash receipts.

The last Annual Fair was, in every respect, a decided success.

The exhibition in each department was larger than heretofore, especially of stock; and a decided improvement in the quality of horses and cattle was a subject of general remark, and a gratifying evidence of the good our Annual Fairs have already accomplished.

The attendance was larger than at any previous Fair, a general good feeling prevailed, and an unabated interest in the exhibition was maintained to the close.

Total cash receipts for tickets, $1,775.

Your committee regret to state that, for several years past, the practice of transferring family tickets has been quite prevalent, depriving the Society of a considerable amount of its just dues; and which, at the last Fair, caused the adoption of a rule forfeiting all tickets attempted to be used, except by persons to whom they properly belonged.

Under the operation of this rule a considerable number of tickets were secured, bearing the names of persons occcupying positions in society so respectable, that the committee are unwilling to believe that, in all cases, the transfer was made with their knowledge.

Your committee would therefore suggest to those having membership

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tickets, that in passing them to different members of the family, particular care be taken that they do not come into the possession of improper persons; and it is earnestly hoped that a sense of justice and a due regard for their own good name will prevent a like occurrence in future.

During the last year, considerable improvements have been made upon the grounds of the Society; the grading has been completed, the tracks and drives put in good condition, a large number of shade trees set, the ring has been much improved, and surrounded by a substantial railing, additional racks, stalls and railings have been built, the eating-house purchased of its former owner, and a beautiful speakers' stand erected in the front grounds.

These improvements have been made at an expense of $1,082.

In addition to this, it is proper to state that after the grading had been completed, a number of gentlemen of the city, interested in the training of horses, covered the broad avenue around the grounds with a heavy coat of gravel, making a smooth and durable surface, at their own expense, at a cost of $175.

The total present indebtedness of the Society is $981. There is due the Society, from responsible persons, $117—leaving a balance of $864 unprovided for.

Within the last two years the Society has expended $2,875 for the improvement of its grounds, has paid $1,154 for premiums, and $806 for the expenses of its Fairs and interest—making a total of $4,835—and now owes one hundred dollars less than its indebtedness two years ago.

It is designed the coming Spring to enlarge and improve the eating-house, and remove it within the enclosure; set out three hundred more trees, furnish the grounds with benches sufficient for seating several hundred persons; put a floor in the main building, and build a handsome office, and picket fence in front, besides some smaller improvements which may at the time be thought necessary.

When this is done, the grounds will contain every convenience necessary for our County Fairs, and will be arranged and fitted up in a style of which few Agricultural Societies can boast; and with a trifling yearly expense for repairs, will become a more attractive place of resort each successive year.

E. J. CONNABLE, *Secretary.*

Jackson, January 8, 1858.

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FIFTH ANNUAL REPORT OF THE JACKSON COUNTY AGRICULTURAL SOCIETY.

The Fifth Annual Fair of the Jackson County Agricultural Society was held on the grounds of the Society, in the city of Jackson, on Wednesday, Thursday and Friday, the 7th, 8th and 9th days of October, 1857.

Wednesday was devoted to the entry and arrangement of stock and other articles for exhibition.

On Thursday, the Viewing Committees began their examinations.

At 2 o'clock, the Annual Address was delivered from the stand, by R. F. Johnstone, Esq., of Detroit.

At 3 o'clock, the three Fire Companies of the city made a grand display of their machines and companies, in full uniform, and gave a very interesting trial of their skill and the power of their engines.

At 10 o'clock, on Friday, a grand trial of speed between trotting horses, came off around the broad avenue, much to the gratification of the spectators.

At 1 o'clock, the Premiums were awarded.

After which, the Officers of the Society were elected, as follows:

Hon. J. E. BEEBE, President.

J. H. HUBBELL, Secretary.

BENJAMIN NEWKIRK, Treasurer.

AMOS PICKETT, Marshal.

Executive Committee—A. H. Delamater, Columbia; J. C. Wood, Jackson; R. E. Aldrich, Parma; S. O. Knapp, Jackson; James DePuy, Spring Arbor; O. L. Cooper, Grass Lake.

Vice Presidents—E. S. Robinson, Waterloo; Jesse Hurd, Henrietta; M. J. Draper, Rives; Henry Townley, Tompkins; S. B. Crawford, Springport; O. L. Rider, Grass Lake; Almon Cain, Leoni; F. M. Foster, Jackson; John McConnell, Blackman; J. E. Ferguson, Summit; Caleb M. Chapel, Sandstone; Daniel Upton, Parma; James Townsend, Napoleon; Alden Hewitt, Columbia; R. J. Crego, Liberty; B. C. Hatch, Hanover; T. S. Hungerford, Pulaski; M. L. Ray, Concord; Grinnell Reynolds,* Spring Arbor.

At 2 o'clock the Equestrian Exhibition took place at the ring.

The weather, during the Fair, was very fine, and the attendance lar-

* Deceased.

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ger than at any previous Fair, and an unabated interest was maintained to the last.

Total cash received for tickets, $1,775.

LIST OF PREMIUMS

Awarded at the Fifth Annual Fair of the Jackson County Agricultural Society, held in Jackson, on the 7th, 8th and 9th days of October, 1857—including Discretionary Premiums allowed by the Executive Committee.

Owing to the imperfect reports of some of the Committees, there may be errors in the list, which will be corrected, if pointed out.

The Premiums will be paid by the Treasurer elect, Mr. B. Newkirk, at the banking-office of Cooper, Thompson & Co.

CATTLE.

CLASS I.

Durhams.

M. Shoemaker, best bull, 5 years old,	$5 00
S. O. Knapp, " 3 "	5 00
H. Frisket, 2d " 3 "	3 00
Wm. Winegar, " 2 "	3 00
Morgan Case, " 1 "	2 00
Lathrop & McNaughton, 2d best bull, 1 year old,	1 00
S. B. Palmer, best bull calf,	2 00
S. W. Palmer, 2d " "	1 00
M. Shoemaker, best cow, 4 years old and over,	5 00
S. W. Palmer, 2d " " "	3 00
D. C. Vickery, best cow, 3 years old,	3 00
S. W. Palmer, 2d " " "	2 00
M. Shoemaker, best heifer, 1 year old,	2 00
" 2d " " "	1 00
" best heifer calf,	2 00
S. W. Palmer, 2d " "	1 00

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CLASS II.

Devons.

George Taylor, best bull, 5 years old,	$5 00
Wm. Barnes, 2d " " "	3 00
Thos. Godfrey, best bull, 3 years old,	5 00
J. S. Storms, 2d " " "	3 00
Ambrose Bean, best bull 2 years old,	3 00
Philander Pease, 2d " " "	2 00
R. Tomlinson, best bull, 1 year old,	2 00
S. Eastman, best bull calf,	2 00
G. C. Draper, 2d " "	1 00
M. Shoemaker, best cow 4 years old and over,	5 00
S. Eastman, 2d " " " "	3 00
M. Shoemaker, best heifer, 2 years old,	2 00
S. Eastman, 2d " " "	1 00
" best heifer, 1 year old,	2 00
M. Shoemaker, 2d best heifer, 1 year old,	1 00
" best heifer calf,	2 00
" 2d " "	1 00

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CLASS III.

Cross of Full Bloods.

Wm. Winegar, best heifer, 2 years old,	$2 00
W. J. Teft, best bull, 4 years old and over,	5 00
J. M. Murphy, best cow, 4 years old and over,	3 00
Thos. Vreeland, best heifer, 1 year old,	1 00
" best bull calf,	1 00
W. S. Warner, best bull, 2 years old,	3 00

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CLASS V.

Cross of Durham and Native.

E. J. Connable, best cow 4 years old and over,	$3 00
R. Irwin, 2d best " " "	2 00
S. O. Knapp, best heifer 3 years old and over,	3 00
H. K. Fritz, 2d best " " "	1 00

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H. F. Holcomb, best heifer 2 years old, ... $2 00
H. L. Gregg, 2d best " " 1 00
E. J. Connable, best heifer 1 year old, ... 2 00
J. J. Maxon, 2d best " " 1 00
Morgan Case, best heifer calf, ... 2 00
M. Shoemaker, 2d best heifer calf, ... 1 00

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CLASS VI.

Cross of Devon and Native.

B. F. Claflin, best cow 4 years old and over, ... $3 00
R. N. Farley, 2d best cow 4 years old and over, ... 2 00
G. C. Draper, best cow 3 years old, ... 3 00
J. T. Wilson, 2d best cow 3 years old, ... 1 00
H. Bush, best heifer 2 years old, ... 2 00
L. D. Wheeler, 2d best heifer 2 years old, ... 1 00
Philander Pease, best heifer 1 year old, ... 2 00
S. O. Knapp, 2d best " " 1 00

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CLASS VII.

Natives.

J. D. Eddy, best cow 4 years old and over, ... $3 00
H. L. Gregg, 2d best cow 4 years old and over, ... 3 00
Wm. Winnegar, best heifer 2 years old, ... 2 00
" 2d best heifer 2 years old, ... 1 00

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WORKING OXEN.

CLASS VIII.

Cross of Durham and Native.

Morgan Case, best yoke of oxen 4 years old and over, ... $3 00
David Markham, 2d best " " " 2 00
Chester Wall, best yoke of steers 2 years old, ... 2 00
B. F. Claflin, " " 1 year old, ... 2 00
Jesse Hurd, 2d " " " 1 00

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CLASS IX.

Cross of Devon and Native.

S. Eastman, best yoke of oxen 4 years old and over,..... $3 00
Jas. McNeil, 2d best " " " 2 00
Thos. Vreeland, best yoke of oxen 2 years old,..... 2 00
L. D. Wheeler, best yoke of calves 4 months old,..... 2 00

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CLASS X.

Natives.

J. E. Ferguson, best yoke oxen 5 years old and over,..... $1 00
Owen Ellison, " 4 " 2 00
L. D. Wheeler, " 3 " 2 00

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HORSES.

CLASS I.

Blood Mares.

[The committee were of opinion that no horses entered in this Class were "full bloods," but would earnestly recommend the following discretionary premiums:]

L. Lindsey, stallion, Eclipse, 8 years old,..... $3 00
W. R. Palmer, Arabian Colt, 2 years old,..... 2 00
D. B. Hibbard, mare, Nelly Bly, 6 years old,..... 2 00
A. Winslow, stallion 1 year old,..... 2 00
Israel Corey, stallion, Bucephalus, 2 years old,..... 2 00

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CLASS II.

Stallions for All Work.

S. Shipman, stallion 5 years old and over,..... $3 00
S. Landon, " " " 3 00

[The committee could not agree to give a first premium to either of the above, and concluded to award a 2d premium to each.

W. H. Hall, best stallion, 4 years old,..... 4 00

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Abel Wood, 2d best stallion 4 years old,	$3 00
R. E. Aldrich, best stallion, 3 years old,	3 00
Wm. Beckwith, 2d " " "	2 00
O. Place, best stallion, 2 years old,	2 00
Z. Allen, " 1 "	2 00
D. D. Gillett, best stallion colt,	2 00
O. Hampton, 2d " "	1 00

[The Committee award the following Discretionary Premiums:]

S. B. Palmer, stallion colt,	1 00
S. Eastman, "	1 00

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CLASS III.

Brood Mares for all work.

W. J. Teft, best mare with foal by side, 4 years old and over,	$5 00
John Stevens, 2d " " " "	3 00
A. W. Daniels, 3d " " " "	2 00
M. Shoemaker, 4th " " " "	1 00
" 2d best mare with foal by side, 3 years old,	3 00

DISCRETIONARY.

W. P. Worden, mare with foal, 4 years old and over,	1 00
James Martin, mare with twin colts, " "	1 00

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CLASS IV.

Matched Carriage, and Single Horses and Mares.

Gager Cady, best pair matched carriage horses, 5 years and over,	$5 00
O. L. Rider, 2d " " " " "	2 00
C. C. Turner, 3d " " " " "	1 00
Knickerbocker & Knapp, best pair matched carriage horses, 4 years old,	4 00
J. D. Eddy, 2d best " " " "	2 00
J. F. Humphrey, best single horse,	3 00
C. G. Grinnell, 2d " "	2 00
Wm. Wyckoff, 3d " "	1 00

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CLASS V.

Draught Horses and Mares.

W. Gould, best pair matched, 5 years old and over,	$5 00
J. E. Furguson, 2d best pair matched, 5 years old and over,	2 00
Lathrop & McNaughton, 3d best " " " "	1 00
P. Palmer, best pair matched, 4 years old,	4 00
Alexander Ford, 2d best pair matched, 4 years old,	2 00
R. J. Livings, 3d " " "	1 00
J. Marvin, best pair matched, 3 years old,	4 00
Lathrop & McNaughton, 2d best pair matched, 3 years old,	2 00
G. W. Fifield, 3d " " "	1 00
F. Cranson, best single horse, 4 years old and over,	2 00
G. C. Draper, best single horse, 3 years old,	2 00
G. W. Benedict, 2d best " " "	1 00
J. Webster, best single horse, 2 years old,	2 00
W. W. Laverty, 2d best " " "	1 00
J. Turk, best single horse, 1 year old,	2 00
Jonas Wing, 2d best " " "	1 00

DISCRETIONARY.

E. G. Lewis, best pair matched colts,	2 00

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TROTTING HORSES.

B. C. Hatch, best matched trotters,	$3 00
S. N. Soper, 2d " "	2 00
J. F. Humphrey, best single trotting gelding,	3 00
C. G. Grinnell, 2d " " "	2 00
A. L. Thayer, best trotting stallion,	3 00
C. Conaut, 2d " "	2 00
D. B. Hibbard, best stallion, 3 years old,	3 00
Chester Wall, best stallion 2 years old,	3 00
E. A. Ferris, best stallion, 1 year old,	3 00

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SHEEP.

CLASS I.

Spanish Merino.

S. B. Palmer, best buck,	$4 00
Crafts & Spaulding, 2d best buck,	2 00
S. B. Palmer, best buck lamb,	2 00
Crafts & Spaulding, 2d best buck lamb,	1 00
" best 3 ewes,	3 00
D. Peckham, 2d best 3 ewes,	1 00
Crafts & Spaulding, best 3 ewe lambs,	1 00
D. Peckham, best ewe,	2 00
" 2d best ewe,	1 00

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CLASS II.

French Merino.

M. Shoemaker, best buck,	$4 00
D. W. Taylor, 2d best buck,	2 00

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CLASS IV.

Cross of Full Bloods.

D. W. Taylor, best buck,	$4 00
H. K. Fritz, 2d best buck,	2 00
D. W. Taylor, best 3 ewes,	3 00
H. K. Fritz, best 3 ewe lambs,	1 00

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CLASS V.

Long Wool.

J. E. Ferguson, 2d best buck,	$2 00
James McNeil, best buck lamb,	2 00
" best 3 ewes,	3 00
" 2d best 3 ewes,	1 00

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CLASS VII.

Cross of French and Native.

W. S. Warner, best 3 ewe lambs, ... $2 00

CLASS IX.

Fat Sheep.

James McNeil, best fat sheep, ... $2 00
" 2d best fat sheep, ... 1 00

SWINE.

CLASS I.

Full Bloods.

L. G. Smedley, best boar, ... $3 00
" best sow, ... 3 00
J. E. Furgeson, best lot of pigs, ... 2 00

CLASS II.

All kinds except Full Bloods.

Wm. Hammond, best boar, ... $3 00
M. Shoemaker, 2d best boar, ... 2 00
James McNeil, 3d best sow, ... 1 00
" best lot pigs, ... 2 00

POULTRY.

D. B. Hibbard, best pair Bantam chickens, ... $1 00
" best lot turkeys, ... 1 00
G. C. Draper, best lot common fowls, ... 1 00
S. Loomis, best lot Muscova ducks, ... 1 00
" best lot 3 white ducks, ... 1 00
Lathrop & McNaughton, 3 English Bramahs, (discretionary,) .. 50
George Kellogg, 1 pair Bramahs, " .. 50
E. Gallup, best lot Cochin China fowls, ... 1 00

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GRAIN.

E. T. Briggs, best bushel wheat,	$2 00
H. K. Gritz, 2d best bushel wheat,	1 00
J. Cranmer, 3d " "	50
D. D. Tooker, best bushel barley,	1 00
M. J. Draper, 2d best bushel barley,	75
Lathrop & McNaughton, 3d best bushel barley,	50
D. D. Tooker, best bushel oats,	1 00
M. J. Draper, 2d best "	75
S. Loomis, 3d best "	50
Henry Norman, best 10 ears yellow corn,	1 00
S. Loomis, 2d best 10 " "	75
M. Shoemaker, 3d " 10 " "	50
W. Barnes, 4th best 10 " "	25
John Stevens, best 10 ears dent corn,	1 00
Isaac Bennett, 2d " 10 " "	75
E. Gallup, 3d " 10 " "	50
J. Whiteman, 4th " 10 " "	25
B. W. Ellison, best 10 ears white corn,	1 00
W. Walworth, 2d " 10 " "	75
Owen Ellison, 3d " 10 " "	50
D. D. Tooker, 4th " 10 " "	25
Geo. Woodworth, vegetable coffee, (discretionary,)	50

VEGETABLES.

J. J. Maxon, best peck onions,	$0 75
Alvah Fowler, 2d best "	50
T. Cranson, 3d best "	25
L. Chapman, best peck potatoes,	1 00
M. Shoemaker, 2d best "	75
Owen Ellison, 3d best "	50
B. F. Claffin, 4th best "	25
B. C. Hatch, best peck turnips,	75
M. Shoemaker, 2d best "	50
Geo. Snyder, 3d best "	25
R. H. Anderson, best peck ruta bagas,	75

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Wm. Winegar, 2d best peck ruta bagas,	$0 50
J. Whiteman, 3d best " "	25
J. T. Wilson, best peck carrots,	75
D. T. Grinnell, 2d best peck carrots,	50
D. D. Tooker, 3d " "	25
E. B. Cochran, best peck parsnips,	75
J. T. Wilson, 2d " "	50
Isaac Bennett, 3d " "	25
H. L. Gregg, best 3 head cabbage,	75
M. Shoemaker, 2d best 3 head cabbage,	50
W. B. Laycock, 3d best 3 "	25
D. T. Grinnell, best bushel mangel wurzel,	75
G. C. Draper, 2d best " " "	50
S. O. Knapp, 3d best " " "	25
C. R. Whitman, best ½ bushel white beans,	75
L. L. Nash, 2d best ½ " " "	50
D. D. Tooker, 3d " ½ " " "	25
A. B. Tinker, best peck tomatoes,	75
J. T. Wilson, 2d best "	50
E. H. Budington, 3d best "	25
Lathrop & McNaughton, best 3 squashes,	75
Wm. Brown, 2d best 3 squashes,	50
D. D. Tooker, 3d best 3 "	25
W. S. Warner, best 3 pumpkins,	75
E. B. Cochran, 2d best 3 pumpkins,	50
J. B. Laycock, 3d best 3 "	25
D. T. Grinnell, best 3 heads celery,	50
E. Van Zant, best egg plant,	50
H. H. Bingham, best bushel sweet corn,	50
D. D. Tooker, best early corn,	50
E. Van Zant, best sweet potatoes,	50
Cyrus Palmerter, best citrons,	50
E. B. Cochran, best bush. of ruta bagas, as sample of 50 bushels,	2 00
T. Case, best bushel of flat turnips, as sample of fifty bushels,	2 00
S. O. Knapp, best bushel of carrots, as sample of fifty bushels,	4 00
E. B. Cochran, best bushel of mangul wurzel, as sample of fifty bushels,	4 00
S. O. Knapp, best and greatest variety of culinary vegetables,	2 00

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DISCRETIONARY PREMIUMS AWARDED.

M. Shoemaker, best 3 heads Kohl Rabbi,	$0 25
D. T. Grinnell, best head cauliflower,	25
Wm. Barnes, best hill China sugar-cane,	25
E. H. Buddington, best bu. Neshannock potatoes,	25
B. J. Miller, best lot of peppers,	25
D. D. Tooker, show-case of 50 varieties of vegetables, &c.,	1 50
R. Cockburn, 4 heads Scotch Kale,	50
Henry Norman, winter radishes,	50
T. Case, 5 bushels flat turnips,	50
D. D. Tooker, Mexican watermelons,	50
Seth Sharpe, Chinese sugar-cane,	25

FRUITS.

G. Bloomfield, best and greatest variety winter apples,	$3 00
H. J. Crego, 2d " " "	2 00
Joab Bigelow, 3d " " "	1 00
R. Lawrence, best and greatest variety fall apples,	3 00
T. B. Tooker, 2d " " "	2 00
D. H. Rogers, 3d " " "	1 00
D. Cook, best 6 varieties of winter apples,	4 00
N. Allen, 2d " "	3 00
D. Cock, 3d " "	2 00
R. Lawrence, 4th best 6 varieties "	1 00
H. J. Crego, best 6 varieties of fall apples,	3 00
D. Cook, 2d " "	2 00
N. Allen, 3d " "	1 00
D. Cook, best specimen of winter apples,	1 00
J. T. Wilson, 2d best specimen "	75
Seth Sharpe, 3d " "	50
J. T. Wilson, best specimen of fall apples,	1 00
T. B. Tooker, 2d " "	75
S. O. Knapp, best and greatest collection of pears,	2 00
B. C. Hatch, best and greatest variety summer pears,	2 00
D. Cook, " " winter pears,	2 00
Lathrop & McNaughton, best specimen "	1 00

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G. L. Gavitt, best and greatest variety of peaches,	$1 00
G. W. Fifield, best peck of peaches,	1 00
Geo. Boulton, 2d " "	50
D. Cook, best peck of quinces,	1 00
S. O. Knapp, best collection of grapes,	1 50
D. T. Grinnell, best collection of Catawba grapes,	1 00
J. T. Wilson, best collection of Isabella grapes,	1 00
D. Cook, best chestnuts,	50
Mrs. R. Hampton, new and greatest collection of grapes,	1 00
H. Carr, white Sweetwater grapes,	50
G. L. Gavitt, seedling grapes,	50
G. Bloomfield, collection of peaches,	1 00
Mrs. D. Merriman, pomegranates,	50

FARM IMPLEMENTS.

Geo. P. Adams, best fanning mill,	$1 00
J. W. Hulin, best steel plow, (dis.,)	1 00
" best fallow plow, (dis.,)	1 00
" best gang plow and distributor,	1 00
Joseph Darling, best threshing-machine,	5 00
A. B. & G. H. Felt, best straw cutter,	1 00
T. Case, 2d best fanning-mill, (dis.,)	50
A. B. & G. H. Felt, best corn-sheller,	50
" best sub-soil plow,	1 00
J. H. Hendee, stump-extractor, (dis.,)	1 00
Rice & Gibson, portable cider-mill,	50
" greasing-jack,	25
V. N. Billings, magic corn-husker,	50

MECHANIC ARTS.

Austin & Tomlinson, best lumber wagon,	$3 00
Pinney & Lamson, best grain cradles,	50
" best scythe-snaths,	50
" best 2-tined forks,	50
" best 3-tined forks,	50

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Pinney & Lamson, best 4-tined forks, ... $0 50
" best 6-tined forks, ... 50
" best solid shank hoes, ... 25
F. W. Anthony, best pair of fine boots, ... 1 00
" best pair of slippers, ... 50
Dakin & Hewitt, best top buggy, ... 2 00
" best open buggy, ... 2 00

DISCRETIONARY PREMIUMS.

Austin & Tomlinson best rockaway carriage, ... $1 00
" best cutter, ... 1 00
H. B. Hale, 2 horse covered carriage, sup., ... 2 00
G. P. Adams, patent wash-tub, ... 50
Philo J. Curtis, patent bee-hive model, ... 1 0
H. Schneckenberger, 3 calf-skins, ... 25
M. E. Dyer, 1 target rifle, ... 1 00
Mrs. I. Hammond, 1 fancy basket, ... 50
Henry Foster, 1 lot of window-springs, ... 50
Lewis & Ayres, 1 O. G. door, ... 50
" 1 door, ... 50
" 1 window-sash, ... 25

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STOVES, HARDWARE AND CUTLERY.

Rice & Gibson, display of stoves, hardware, and self-sealing cans, (dis.,) $2 50

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BREAD, BUTTER, CHEESE AND HONEY.

Miss Lena Ukela, best hop-yeast bread, ... $2 50

[Receipt for Making the Above.—The sponge is prepared with new milk, fresh hop-yeast, home-made, and a little salt. When perfectly light, sufficient flour is added to mould it. It is then left to rise a second time. When light, it is moulded into loaves, and in a short time will be ready for the oven. No salaratus or soda used.]

Miss M. Murphy, 2d best hop-yeast bread, ... 1 00
Mrs. D. Chapel, best salt-rising bread, ... 2 00

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[Receipt for Making the Above.—Rising made of warm water and a little salt, and set in a warm place to rise. When raised, prepare the flour and warm the milk for making the sponge as warm as it can be without scalding the rising. Stir in the rising and let it stand until light; then mix hard, make it into loaves, and let it stand awhile. Then bake one hour.]

Mrs. Morgan Case, 2d best salt-rising bread, ... 1 00
Mrs. M. J. Draper, best 10 lbs. of butter, ... 2 0

[Receipt for Making the Above.—The 1st of September. Cream taken from the milk at the time of changing from sweet to sour; churn immediately; separate all the butter-milk by working with a ladle; put into a stone crock, after salting with fine table salt.]

Mrs. M. G. Wade, 2d best 10 lbs. of butter, ... 1 00
Mrs. R. Davis, best sample of cheese, ... 3 00
Mrs. J. C. Griffin, 2d best " " 2 00
Mrs. D. Chapel, 3d best " " (Dis.) 1 00
Silas Hayes, best sample of honey, ... 1 00

DISCRETIONARY.

Mrs. C. Judson, 1 jar butter, ... 50
J. Butler, cottage bee-house and 2 swarms bees, ... 1 00
Webb & Butler, display of soda biscuit, crackers and confectionery, ... 1 00

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DOMESTIC MANUFACTURES.

Mrs. J. Bronson, best quilt, ... $1 00
Mrs. Doct. Tuttle, 2d best quilt, ... 75
Mrs. L. Pickett, 3d " 50
Mrs. Alvah True, best coverlet, ... 1 00
" 2d best " 75
Mrs. E. Comstock, best roll carpeting, ... 1 00
Mrs. T. Snyder, 2d " " 50
" best 10 yards flannel, ... 1 00
Mrs. M. Case, best stocking-yarn, ... 1 00
Mrs. M. G. Wade, 2d best stocking-yarn, ... 50
Mrs. M. Case, best woolen shawl, ... 50
Mrs. R. Davis, best pair socks, ... 50

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Phœbe Hoagg, 2d best pair socks,	$0 25
Mrs. R. Davis, best ladies white worsted hose,	50
Phœbe Hoagg, best pair mittens,	50
Mrs. R. Davis, best comfortable,	50
Helen J. Griffith, one cloth rug,	50
Mrs. Daniel West, specimen of linen floss,	50
Mrs. P. Jenkins, gentleman's dressing-gown,	50
C. Dyer, box of candles,	50
Miss M. Maloy, specimen of laundry-work,	50
Mrs. E. Williams, " " "	25

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NEEDLE, SHELL AND WAX-WORK.

Julia A. Wheeler, tree of worsted flowers,	$0 75
Mrs. E. M. Shaw, best specimen wax-work,	1 00
Sarah Turner, best embroidered collar,	75
Mrs. B. Packard, 2d best " "	50
Mrs. E. M. Curtis, best specimen hair-flowers,	75
Miss J. A. Conant, one silk cape,	50
Miss L. Tuttle, best embroidered handkerchief,	75
Mrs. L. A. Nellis, 2d best " "	50
Mrs. O. H. Loyd, best embroidered cape,	1 00
Mrs. L. A. Nellis, 2d best " "	50
Miss Mary Burr, best tidy,	75
Miss L. Tuttle, 2d best tidy,	50
Miss H. Burr, best ottoman cover,	1 00
Miss L. A. Nellis, best embroidered scarf,	75
Miss M. E. Sevy, best embroidered skirt,	1 00
Mrs. E. M. Shaw, 2d best " "	50
Miss M. E. Sevy, best embroidered dress,	1 00
" 2d best " "	50
" best crotchet collar,	50
Mrs. A. Downs, best ladies bonnets,	2 00
L. Kassick, 2d best " "	1 00
Miss L. Tuttle, best embroidery,	1 00

DISCRETIONARY.

Miss J. Judson, 2d best embroidery,	1 00

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Miss M. Graham, 3d best embrodiery, ... $1 00
Miss F. Choate, embroidered night-dress, ... 1 00
Miss E. Hammond, child's hood, embroidered, ... 50
Mrs. L. Fletcher, 12 pieces needle-work, ... 1 00
Mrs. R. C. Crawford, 1 worked gents shirt, ... 50

PAINTINGS, DRAWINGS, DAGUERREOTYPES, MUSICAL INSTRUMENTS AND FLOWERS.

D. R. Robbins, best photograph, (Dis.) $1 00
J. V. Cookingham, best daguerreotype, ... 1 00
O. F. Pool, best melodeon, ... 1 50
L. Kassick, best water-color painting, ... 1 00
Mrs. Doct. Tuttle, 2d best " 50
Mrs. E. M. Shaw, best monochromatic painting, ... 1 00
Mrs. M. McGee, 2d best " " 50
Mrs. R. F. Lattimore, best crayon painting, (Dis.) 50
S. Jennings, specimen fancy penmanship, (Dis.) 50
J. T. Wilson, best collection of flowers, ... 2 00
D. T. Grinnell, 2d best " " 1 00
Rev. Mr. Catlin, 3d best " " 50
J. T. Wilson, best and greatest variety of dahlais, ... 1 00
D. T. Grinnell, 2d best " " " 50
J. T. Wilson, best and grestest variety verbenas, ... 1 00
" " " " house-plants, ... 1 00
Mrs. P. Corey, best bouquet, ... 1 00
Mrs. G. F. Rice, 2d best " 75
Mrs. S. B. Treadwell, 3d best bouquet, ... 50
Miss F. Choate, best basket flowers, ... 1 00
Mrs. E. K. Crafts, 2d best collection house-plants, ... 50
Miss S. M. Woodbury, best Grecian oil-painting, ... 1 00
Mrs. Doct. Tuttle, 2d best " " 50
W. W. Hathaway, specimen of graining, (Dis.) 50

MISCELLANEOUS ARTICLES.

Mrs. E. M. Curtis, leather and hair-work, ... $1 00
T. A. Walworth, gold specimens, ... 50

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Burr & Thurber, display plated and China-ware,	$2 00
V. R. Green, display of perfumery, &c.,	1 00
J. J. Hendee, sugar-cane syrup,	50
Mrs. J. M. Murphy, bottle currant shrub,	50
" " best currant wine,	50
Mrs. J. P. Shoemaker, currant wine,	25
Mrs. E. Pringle, currant wine,	25
E. Van Zandt, sugar-cane syrup,	50
Mrs. W. Williams, jar of pickles,	50
" jar of jell,	50
Henry Foster, flying wind-vessels,	1 00
" squirrels and cage,	25
Mrs. B. Newkirk, jar preserves,	50
Mrs. R. Davis, birds and cage,	25
Mrs. Doct. Tuttle, " "	25
Miss M. Langdon, " "	25
Mrs. F. E. McNaughton, birds and cage,	25

[Your Committee would make especial mention of the rich display of house-furnishing and fancy-goods, from the mammoth store of W. M. Bennett, and also from Mosher & Chapman's, consisting of a variety of carpetings, rugs, mats, curtains, rich dress goods, embroideries, &c., which formed an attractive feature of the Fair, and exhibited the ample resources of their establishments.]

LADIES EQUESTRIANISM.

The committee on Female Equestrianism beg leave to make the following report:

There is probably no feature of an Agricultural Exhibition that gives so much zest to the entertainment, and attracts such crowds of interested and anxious witnesses, as a public exhibition of skill in Equestrianism; more particularly so, if that skill is of such an order as to command our admiration.

It is not to be supposed that we have yet reached that degree of excellence in the art, for exhibitions of this character are comparatively recent. Yet, in justice to the young ladies, it must be acknowledged that in this, their first public effort, they acquitted themselves with

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credit, and to the great delight and gratification of thousands of admiring witnesses.

Excellence in the art does not of course depend in the amount of speed attained by the animal. The facility with which, at a high rate of speed, he is brought into graceful acquiescence and submission to a lower rate, and, in short, any other evidences of the control of the rider over the movements of the animal, when added to a ready presence of mind, grace and ease in adapting one's movements to those of the animal, conjoin to make the degree of excellence aimed at.

Your committee were really placed in the most trying and delicate position, for the contestants all rode well, and yet defects were equally apparent in all, which, by a little judicious effort and encouragement, will be remedied.

Our award is as follows:

Miss Sarah M. Peterson,	1st	premium,	$5 00
Miss Mary E. Wood,	2d	"	3 00
Miss Nelly Moulton,	3d	"	2 00
Miss Annis Palmer,	4th	"	1 00
Miss Mary King, (discretionary,)			1 00

All of which is respectfully submitted.

J. TUNNICLIFF, JR.,
S. G. STRONG,
ALEXANDER FORD,
H. O. BRONSON,
JOHN McCONNELL,
L. H. JONES,

Committee.

EXECUTIVE MEETING.

The annual meeting of the officers of the Society was held at the office of the President, in Jackson, on the 8th of January, at which the following General Rules, Programme, Premium List, &c., for the next Annual Fair, to be held on the grounds of the Society, on Wednesday, Thursday and Friday, the 6th, 7th and 8th days of October, 1858, was unanimously adopted:

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TICKETS.

Tickets of Membership, (not transferable,) $1; will admit the members of one family, exclusive of sons over twenty-one years of age, during the continuance of the Fair.

Single Tickets, twenty-five cents—good for one admission only.

No variation from the above prices, or exceptions, will be made, except in the cases of clergymen; but officers, judges, and all others, will be required to purchase tickets before entering the grounds. Officiating clergymen admitted free.

Pamphlets containing the General Rules, Programme, Premium List, etc., for the next Annual Fair, will be sent by mail to all persons purchasing family tickets.

All tickets attempted to be used, except by the persons to whom they properly belong, will be forfeited.

Free tickets will be furnished by the Secretary to men necessary, in his opinion, to take care of stock.

Tickets can be had of the Treasurer, during the week of the Fair, and for some weeks previous, at the Banking Office of Cooper, Thompson, & Co.

GENERAL RULES.

1. Any person may become a member of the Society for one year by paying one dollar into the Treasury.

2. Members of the Society will be entitled to enter articles for exhibition in their own name, or in that of any member of their family entitled to admission on their tickets, to vote for officers, and on all questions before the Society at its annual meeting, and are entitled to all other privileges afforded by the Society.

3. All articles intended for exhibition must be entered at the business office, at the entrance of the show ground, before entering the enclosure, and particular care should be taken that they be entered in their appropriate classes.

4. The Superintendents will receive the articles designed for exhibition in their several departments, arrange them in their proper places and exercise the necessary care over them during the Fair.

5. Exhibitors will be careful to have their animals and articles arranged in their appropriate places, and in season, otherwise they will be overlooked by the Viewing Committees.

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6. All animals and articles intended for exhibition should be entered on Wednesday, the first day of the Fair, but must be entered and arranged in their proper places by 10 o'clock, A. M., of Thursday, without fail, so as to take their places in the grand cavalcade.

7. Cards will be furnished with the number as entered at the office. Exhibitors will be careful to place these cards upon or near the articles or animals, so that the judges will have no difficulty in finding them.

8. Exhibitors of horses will take notice that a banner will be raised in the centre of the ring, designating the class of horses desired for examination by the judges, when all horses of that class must be brought into the ring, under direction of the Superintendent, and there remain until the judges shall have decided upon their merits.

9. No discretionary premiums will be paid until approved by the Executive Committee, and they may modify or refuse to allow the same, as they may deem proper.

10. No person will be allowed to act as judge of any class in which he is a competitor, and no premium will be paid to persons violating this rule.

11. Horses and carriages entering the grounds, will not be allowed off the tracks, except on the side next the river, and immediately in front of the main building, unless by permission of the Marshal. They are required to move at all times in the same direction, keeping the centre of the grounds on the left.

12. All fast or unsafe riding or driving within the enclosure, during the Fair, is strictly forbidden, and persons violating this rule will be required to leave the grounds.

13. No horses or other animals will be allowed to be tied within the grounds, except to the racks provided for that purpose.

14. During the Equestrian Exhibition, ladies may occupy the centre of the ring, provided they will remain seated during the exercises. No other persons will be allowed in the ring, except the proper officers. This rule will be strictly enforced.

15. No animals or articles entered for exhibition can be taken from the ground before 2 o'clock, P. M., of the last day of the Fair, and no premium will be paid on animals or articles removed in violation of this rule.

16. All premiums not called for prior to the first day of January next succeeding the Fair, will be forfeited to the Society.

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FEED FOR STOCK.

The Executive Committee take this occasion to say that an ample supply of fodder for stock, free of charge, will be provided, without fail. Particular pains will be taken, that in this respect there shall be no cause of complaint.

NIGHT WATCH.

A suitable police force will be kept on duty at night, to protect the animals and other property which may remain upon the grounds.

KALAMAZOO COUNTY.

SECRETARY'S OFFICE KALAMAZOO CO. AG'L SOC'Y,
Kalamazoo, Mich., Aug. 1, 1858.

R. F. JOHNSTONE, ESQ., *Sec'y Mich. State Agricultural Society*:

DEAR SIR—Inclosed please find the statement of transactions of the Kalamazoo County Agricultural Society for the year 1857.

I do not deem it advisable to add any matter to go into the volume of transactions of the State Agricultural Society, believing in such a compilation, "multum in parvo" should be one of the main features. I will say, however, that our Society is in a very prosperous condition; the shows are well attended; much interest (even by town's people,) is had in its welfare, and every year evidences marked improvement in stock growing, farm products, mechanics, and fine arts. The advantages of such a Society, socially considered, must not be overlooked. The benefits thus derived in our County Society are incalculable.

Our Fair for the present year is to be held on the 22d, 23d and 24th September next, as per circular, which I also send you.

Yours respectfully,

FRANK LITTLE,
Sec. Kal. Co. Ag. Soc.

KALAMAZOO CO. AGRICULTURAL SOCIETY.

The twelfth Annual Fair and Cattle Show of the Kalamazoo County Agricultural Society was held upon the Fair Ground of the Society in Kalamazoo, on Tuesday, Wednesday and Thursday, September 22d,

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23d and 24th, A. D. 1857. An address was delivered before the association by Hon. Jos. R. Williams.

REPORTS OF COMMITTEES AND AWARD OF PREMIUMS.

HORSES.

CLASS I.

Stallions.

The committee on horses included in class No. 1, respectfully report, that in performing the duties assigned them, they were surprised to see an exhibition of animals so inferior in quality. Whatever may be the cause for this, it certainly is not because there are not superior animals in this county. And it is equally clear that the present exhibition does injustice to both the judgment and taste of Kalamazoo farmers. The draft horses were barely medium for such service; horses for all work something better; and among the colts with two or three exceptions, there was nothing that deserves even toleration for stock purposes. These exceptions were found among the three and two years old, and one or two of these are very fine.

In the division of thorough-bred, there was but one horse exhibited and as no pedigree was furnished of him, no award upon him was made. He is a fine animal, but your committee doubt his being entirely thorough-bred.

The committee have thought these remarks necessary and proper in the complete discharge of their duties, and they also venture to suggest to the executive committee the propriety of hereafter omitting to distinguish between stallions and geldings in awarding premiums under three years old. They think no judgment of the Society on animals of this kind for stock purposes, should be pronounced before the animal is three years old.

Having thus briefly stated the grounds on which their labors were performed, they will now state the awards:

Best stallion for draft and farm purposes, P. S. Wait,	$5 00
2d best " " A. Drake,	3 00
Best stallion for all work, S. R. Balch,	5 00
2d best " Phillip Goodrich,	3 00
Best 4 year old stallion, Jas. Frakes,	3 00
2d best " Elisha Potter,	2 00

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Best 3 year old stallion colt,	Chauncey Root,		$4 00
2d best "	Theodore Andrews,		3 00
3d best "	E. Hope,		2 00
Best 2 year old stallion colt,	J. F. Gilkey,		3 00
2d best "	N. A. Balch,		2 00
3d best "	E. S. Knapp,		1 00
Best yearling stallion colt,	E. S. Knapp,		2 00
2d best "	Peter Jenkins,		1 00

All which is respectfully submitted.

Committee—Charles E. Stuart, John A. Kendall.

CLASS II.

Brood Mares.

Best brood mare,	F. Ransom,		$4 00
2d best "	O. B. Flagg,		3 00
3d best "	A. U. Monroe,		2 00
Best 3 year old mare colt,	J. Taylor,		3 00
2d best "	D. C. Cameron,		2 00
3d best "	Peter Jenkins,		1 00
Best 2 year old mare colt,	Z. Gould,		3 00
2d best "	Eli Douglass,		2 00
3d best "	Azra Healey,		1 00
Best 1 year old mare colt,	James Lattie,		2 00
2d best "	H. F. Cook,		1 00
Best sucking colt,	H. B. Douglass,		2 00
2d best "	F. Ransom,		1 00

Committee—F. W. Hatch, Z. Fletcher, R. Crosby.

CLASS III.

Matched and Single Horses.

The committee on horses, Class 3, would respectfully report, that they have performed the task assigned them, to the best of their ability. Taking into consideration the short time they had to devote to that business, only about two hours, and over sixty horses entered for examination, they could not bestow that careful examination that ought to

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have been bestowed in justice to themselves and the owners of the horses. Therefore your committee do not make their awards with as much confidence in their correctness as they could desire.

Best matched horses, A. Ferguson,	$3 00
2d best " B. M. Austin,	2 00
Best farm horses, C. W. Killbourne,	3 00
2d best " John Millham,	2 00
Best 4 year old colt, mare or gelding, N. P. Ingersoll,	3 00
Best 3 " " E. R. Howe,	3 00
Best 2 " " Edwin Warren,	2 00
Best single horse, G. H. Gale,	3 00
2d best " Dr. Sill,	2 00

All which is respectfully submitted.

E. T. LOVELL, *Ch'n.*

CATTLE.

CLASS I AND II.

Devons and Ayrshires.

Best Devon cow, Ahira Kent,	$5 00
2d best " F. Ransom,	3 00
Best Devon bull, E. N. Peck,	5 00
Best 1 year old heifer, F. Ransom,	3 00
Best Devon calf, "	3 00
Best bull calf, Ahira Kent,	3 00

Committee—E. O. Humphrey, Gould Richardson.

CLASS III AND IV.

Durhams and Herefords.

The committee on Durhams and Herefords report:

Best bull 3 years old and over, Daniel McAlbertson,	$5 00
" 2 " " Dr. Ransom,	5 00
2d " " " M. Hydenburgh,	3 00
Best bull 1 year old, John Milham,	5 00
Best bull calf, H. Arnold,	3 00
2d " D. F. Lane,	2 00

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Best cow 3 years old and over, D. McKee, ... $5 00
2d " " " J. Milham, ... 3 00
Best 1 year old heifer, D. McKee, ... 3 00
Best heifer calf, D. McKee, ... 3 00

The committee would notice the stock shown by A. Y. Moore; particularly one cow and calf, which are deserving of credit, and are an honor to the county, but which were ruled out by not arriving on the grounds until the last day of the Fair.

Committee—Philo Vradenburg, C. O. Tyrrell.

CLASS V.

Grade Cattle.

Your committee on Grade Cattle would respectfully report:

Best 3 year old bull, H. F. Nesbitt, ... $5 00
2d " Jas. Taylor, ... 3 00
Best 2 year old bull, L. B. Shaw, ... 3 00
2d " E. R. Miller, ... 2 00
Best yearling bull, R. T. Balch, ... 3 00
2d " Ahira Kent, ... 2 00
Best bull calf, Job Mallow, ... 3 00
2d " C. M. Fletcher, ... 2 00
Best cow, S. R. Balch, ... 5 00
2d " John Cadman, ... 4 00
3d " S. N. Lillie, ... 2 00
Best 2 year old heifer, W. Beckwith, ... 3 00
2d " Chas. Cobb, ... 2 00
Best yearling heifer, W. Beckwith, ... 3 00
2d " J. H. Wells, ... 2 00
Best heifer calf, S. R. Balch, ... 3 00
2d " A. Eames, ... 2 00

Committee—Stephen Eldred, James Franklin.

CLASS VI.

Native Cattle.

The Committee on Native Cattle report as follows:

Best cow, W. A. Tomlinson, ... $5 00

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2d best cow, R. T. Balch,..... $3 00
Best yearling heifer, J. B. Cobb,..... 3 00

Committee—H. Dale Adams, Wm. E. Bellows.

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CLASS VII.

Working Oxen.

Your committee on Working Oxen would report the following premiums:

Best pair of working cattle, Alfred Latta,..... $4 00
2d " " C. M. Fletcher,..... 3 00

Steers.

Best pair 3 year old steers, L. Evans,..... $3 00
2d " " J. W. Brown,..... 2 00
Best pair 2 year old steers, N. A. Balch,..... 3 00
2d " " H. Daily,..... 2 00
Best pair yearling steers, W. Beckwith,..... 2 00
2d " " J. H. Wells,..... 1 00
Best fatted ox, grain fed, Jas. Taylor,..... 3 00
" cow, grass fed, " 3 00

Committee—L. S. Burdick, L. A. Crane, M. Curtis.

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CLASS VIII.

Dairy Cows.

The committee on Dairy Cows award 1st premiums on dairy, with statement, to M. Hydenburgh,..... $4 00
Best dairy cow, with statement, M. Hydenburgh,..... 3 00
Best lot of four calves, with statement, M. Hydenburgh,..... 3 00

Committee—Richard S. Gage, Aaron Eames.

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REPORT OF THE COMMITTEE ON DAIRY.

The committee on Dairy and its products beg leave to say, that although their labors have not been arduous nor complicated, yet they take pleasure in commending the statement and samples submitted to

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them for their discretion. Your committee take pride in recommending to the Society's favorable notice, the excellent samples of butter and cheese submitted by Mr. M. Hydenburgh. We, in the meantime, regret that so small attention is paid to this important branch of husbandry, when in view that the manufacturing of butter and cheese so largely remunerates the producer with prices that are ample for the capital and outlay used in the enterprise, but will successfully defy competition from abroad, when the facilities of Michigan, and especially Kalamazoo county, are taken into consideration with those of the celebrated dairies of Vermont, and Herkimer and Orange counties of New York; also, Hamburg and Ohio.

The committee would here urge upon the farmers of this county the necessity of engaging more largely in the productions of the dairy, as not only a source of large profit to themselves, but as great convenience to a large and increasing number of consumers of these articles.

There can be no good argument used why Kalamazoo county should not export large amounts of butter and cheese, and thereby employ the capital which is now used in other enterprises, which is expended upon the importation of these articles. It is the wish of your committee that on annual Fairs of other years, competitors will number hundreds then, as now they only number one.

All of which is respectfully submitted.

Committee—Richard S. Gage, Aaron Eames.

STATEMENT OF M. HYDENBURGH.

Statement of the products of a dairy of five cows, as per trial made the middle of June, and also the middle of September, for six days in each trial.

No. 1—Durham grade, 4 years old, calved the 2d of May—average quantity of milk, 19 quarts per day. No. 2—Durham grade, 5 years old; calved 16th of May—average quantity of milk, 18 quarts per day. No. 3 and 4, same blood, one three, the other four years old; calved the 5th and 6th of May, and each gave near 16 quarts per day. No. 5—Devon grade, five years old; calved May 8th; gave 15 quarts milk per day.

Making the total amount of milk, for six days, 504 quarts, which

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produced 120¾ lbs. of cheese, or a fraction over 4 lbs. per day to each cow.

In September, the average quantity of milk was a little short of ten quarts for each cow, one-half of which produced 39 lbs. of cheese, or 2 9-16ths per day to each cow. The other half was made into butter, but the weather was very warm and the trial not satisfactory. The result was but a small fraction over one pound per day to each cow.

The feed for the cows was good pasture, and in the fall a little corn-fodder was added to the pasture.

A part of the products is herewith submitted.

A trial was also made with one cow, (Durham,) which gave 18½ quarts per day, for six days in June, which made 10½ lbs. butter in June, and 10 quarts milk and 1 lb. of butter per day in September, which is herewith submitted.

FOREIGN STOCK.

Best Durham bull, Hiram Lewis, Prairieville, Mich; also, 4 superior Durham cows and 2 calves, ... $5 00

A fine 2 year old colt, belonging to Challenge Wheeler.

Best stallion for all work, a fine Morgan horse, no competition, B. G. & E. Buell, Little Prairie Ronde, Cass Co., ... 5 00

Best span matched horses, superior for the road, Geo. Hoffman.

Best span draft horses, C. E. Bartlett.

Committee—C. E. Bartlett, H. M. Peck.

SHEEP.

CLASS I.

Saxon and French Merino.

The committee on French, Merino and grade sheep have awarded the following premiums:

Best buck, S. Boyles, ... $3 00
2d best buck, W. W. McClelland, ... 2 00
Best 5 ewes, Samuel Boyles, ... 3 00
2d best " J. W. Briggs, ... 2 00
Best 5 ewe lambs, J. W. Briggs, ... 3 00

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There being no entry of 5 buck lambs in one pen, no premium is awarded. As there was no premium offered for a less number of ewes than 5, your committee deem it but just to mention 3 ewes, W. W. McClelland, and a single ewe, M. M. Thayer, as decidedly superior animals of their class.

Committee—L. W. Lovell, Henry Knapen, J. P. Warner.

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CLASS II AND III.

Spanish, &c.

Your committee on Spanish sheep and their grades would report as follows:

Best Spanish buck, Levi Blackman,	$3 00
2d best " C. E. Stuart,	2 00
Best 5 Spanish ewes, L. B. Shaw,	3 00
2d best " " " "	2 00
Best 5 ewe lambs, E. O. Humphrey,	3 00
Best 5 buck lambs, " "	3 00
2d best " " C. E. Stuart,	2 00

Committee—R. Bishop, Samuel Crooks.

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CLASS IV AND V.

Leicester and South Downs.

Your committee on Leicester, South Down and other grades, would respectfully report that they have examined the animals of this class and would report the following premiums:

Best South Down buck, A. Thomas,	$3 00
Best South Down 5 ewes, "	3 00
Best Leicester buck, C. E. Stuart,	3 00
Best Leicester 5 ewe lambs, J. Taylor,	3 00
2d best " " C. B. Smith,	2 00
Best Leicester 5 ewes, C. E. Stuart, (dis. prem.)	1 00

Committee—J. N. LeFevre, Daniel Struble, J. O. Riddle.

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SWINE.

To Hon. Board of Officers Agricultural Society, 1857, your Committee humbly report as follows:

Best boar, 1 year old or over, Jas. Taylor,	$3 00
2d best " " " J. B. Cobb,	2 00
Best boar pig, Alix McCall,	2 00
Best sow pig, Ed. Davis,	2 00
Best sow, 1 year old or over, A. Y. Moore,	3 00
2d best " " " M. Heydenburgh,	2 00
Best sow and pigs, not less than 5, Allison Kinnee,	3 00
2d best " " " C. Y. McCracken,	2 00

Committee—M. O. Streeter, R. Barney, S. D. Barber.

VEGETABLES.

Committee on Vegetables would respectfully report, and recommend the following list of Premiums:

Best 12 turnips, J. N. Brown,	$0 50
" 12 tomatoes, S. N. Lillie,	50
" lot sweet potatoes, Erasmus Davis,	50
" lot peppers, Geo. Taylor,	50
" 3 cabbages, H. Dailey,	50
" 3 squashes, Thos. Wright,	50
" 3 pumpkins, E. R. Miller,	50
" 6 stalks celery, Enos Merrill,	50
" specimen of egg plant, Geo. Taylor,	50
" half peck Lima beans, P. C. Davis,	50
" half peck white beans, H. Skinner,	50
" half bushel potatoes, H. Nesbitt,	50
" and greatest variety of potatoes, H. Skinner,	50
" 12 ears dent corn, B. Crapoe,	50
" 12 ears sweet corn, Geo. Taylor,	50

Your Committee recommend the following Discretionary Premiums:

Best lot Chinese sugar cane, A. Eames,	50
" lot king Phillip corn, L. B. Shaw,	50

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Best lot Kohl Rabi, P. C. Davis,	$0 50
" 13 varieties of potatoes, R. T. Balch,	50
" 5 carrots, R. T. Balch,	50
" rhubarb, P. C. Davis,	50
" 12 parsnips, Geo. Taylor,	50

All of which is respectfully submitted.

Committee—H. L. Booth, Milton Bradley.

FRUIT.

Professional List.

A large variety of Fruit, consisting of 30 varieties of apples, 15 var. seedling apple, 5 var. pears, 12 var. peaches, 4 var. seedling peach, lot Lawton blackberries, 3 var. grapes, entered by S. Johnson, on which there was no competition, among which was the seedling golden beauty, which the committee recommend as a superior seedling peach.

Your Committee recommend a premium to this lot of $8 00.

Best and greatest varieties of apples, Enos Merrill,	2 00
Best 3 varieties of pears, Enos Merrill,	2 00

Committee—F. E. Woodard, H. A. King, Isaac Cox.

Amateur List.

The Committee on the Amateur list of Fruit, report, that having examined the fruit with all the care the time allowed admits of, have awarded the following premiums, viz:

Best 6 varieties of winter apples, Jas. N. Brown,	$2 00
" 6 varieties of fall apples, Geo. Taylor,	2 00
" and greatest variety of apples, Alfred Kemp,	2 00
" 3 varieties of peaches, Enos Merrill,	2 00
" " pears, P. C. Davis,	2 00

They would also recommend a Discretionary Premium for a choice basket of fruit, assorted, Aaron Eames, 50c.

Also, a Discretionary Premium for a choice basket of plums, consisting of three varieties, to S. S. Cobb, with a request to the exhibitor

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that he will publish the way he has pursued, in combating that pest of all plum-growers, the curculio, $1.

The Committee cannot but commend the exhibitors for their zeal in fruit-growing, when we have so many fine specimens of choice fruit on exhibition, all so truly good as to baffle the judgment of the committee, in making their award.

Committee—A. T. Prouty, Thomas Clapp, D. T. Lane.

POULTRY.

Your Committee regret to be under the necessity of reporting the show of Poultry small in numbers, and below par in appearance. One coop of Bantams and one of Shanghais, of respectable appearance, were not entered. One coop of Bantams and chickens, and one of Shanghais, labelled, S. H. Williams, the committee concluded, from the fact of being so labelled, were not intended to compete for a premium. One small coop of white Shanghais completed the list, which the committee did not deem sufficiently meritorious to entitle them to a premium, as there was really no competition. The show is the most meagre ever before on exhibition, the cause for which does not appropriately belong to this Committee to report.

Most respectfully submitted by your committee.

Committee—O. C. Hill, V. C. Smith, Silas N. Lillie.

PAINTINGS, DRAWINGS, ETC.

Your Committee would beg leave to report, after examination, the following:

Best specimen portrait painting, Cornelia Cock,	$2 00
Best specimen landscape drawing, Mary Vickery,	2 00
2d best " " " Geo. Kemp, jr., (d. p.)	1 00
Best specimen ambrotype, Baldwin,	1 00
Best crayon sketch, (d. p.) Miss E. Barker,	1 00
" " colored, (d. p.) Miss H. N. Rice,	1 00
2d best " " " Lucia Eames,	50
Best specimen Pastel, d. p. Ella Fletcher,	1 00
Fine " landscape drawing, d. p., Cornelia Cock,	1 00

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Your Committee would report against Oriental and Grecian painting, and recommend pencil or crayon instead, as calculated to cultivate a better taste. The specimens of pencilling crayon were all good, and in addition to those above mentioned as deserving premium, we would mention as deserving of notice and exhibiting great skill and promise,

6 pencil sketches, Geo. Kemp;
1 crayon head, S. H. Spoor;
Pencil sketches, " "
" " Lucia Eames;
1 crayon study, " "
2 architectural drawings, David Hopkins;
1 crayon drawing, Cornelia Cock.

Committee—Geo. Torrey, S. H. Graves, Merissa Stuart.

FLOWERS.

Committee on Flowers respectfully report:

1 bouquet, grains and grapes, d. p., Mrs. E. R. Miller,	$1 00
1 lot dahlias, P. C. Davis,	2 00
40 varieties verbenas, E. Watkins,	2 00
16 " " Mrs. Mary Burtt,	1 00
1 bouquet, Mrs. Mary Burrt,	2 00
1 bouquet, Mrs. E. Bennett,	1 00
1 basket, d. p., Mrs. D. A. McNair,	1 00
Best and greatest variety of flowers, Geo. Taylor,	3 00
Best collection green house plants, E. Watkins,	3 00
2d " " Geo. Taylor,	2 00
Best collection roses, E. Watkins,	2 00
Best floral design, E. Watkins,	2 00
Best pyramidal bouquet, E. Watkins,	2 00

Committee—A. Thomas, Mrs. F. E. Woodward, Miss Carrie Woodbury.

FARM IMPLEMENTS.

Breaking plow, 1st premium, G. Dodge,	$1 00
Sub-soil " " " "	1 00

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Prairie plow, 1st premium, C. Dodge,..... $1 00
Shore " " " " 1 00
Corn cultivator, " " " 1 00
Opening plow, " " " 1 00
Roller, Robinson & Wood,..... 2 00
Hay-rake, G. Schillinger,..... 1 00
Farm wagon, Hogeboon & Burrell,..... 3 00
2d " " 2 00
6 rakes, Jas. Adams,..... 1 00

Committee would recommend premiums to the articles found below, or to the action of the Executive Committee:

Stump machine, A. Drake, Jr.,..... $1 00
Corn and cob mill, H. G. Bulkley,..... 2 00

Committee—J. B. Cobb, R. May, John Milham.

HOUSEHOLD PRODUCTS.

Your committee on Household and Dairy Products would report the following list of premiums:

Best 20 lbs. cheese, Patrick Bunbury,..... $2 00
2d " " " 1 00
Best 20 lbs. butter, James Andrews,..... 2 00
2d " " Mrs. J. P. Warner,..... 1 00
Best 3 loaves bread, Miss Clara Hicks,..... 2 00
2d " " Miss S. R. Warner,..... 1 00
Best 3 pies for dessert, Miss M. P. Huydenburk,..... 2 00
2d " " Mrs. Wm. Burtt,..... 1 00
Best lot honey, (no competition,) J. L. Reed,..... 3 00
Bottle currant wine, Dr. J. Cadman, d. p.,..... 1 00
" " Mrs. Geo. Torrey, d. p.,..... 75

Committee—Geo. E. Read, Mrs. James Bates, Mrs. Dr. Sill.

DOMESTIC MANUFACTURES.

Committee on Domestic Manufactures respectfully report:

Best rag carpet, L. Robbins,..... $2 00
2d " " 1 00

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Quilt, Mrs. Nesbitt,	$2 00
Quilt worked by girl 5 years old, G. H. Green, the committee recommend a dis. premium of	1 00
Best sample woolen yarn, Mrs. B. Russell,	1 00
Best mixed wool stockings, J. N. Burtt,	1 00
Best wool socks, Mrs. Wm. Burtt,	1 00
Carpet coverlet, Mrs. W. O. Tuttle,	1 00
Best woolen mittens, Mrs. E. Bennett,	1 00
Sample maple sugar, D. Jeffers, d. p.,	50
Straw hat, Miss Minerva Huydenburk, d. p.,	50
Basket, " " "	50
Patchwork quilt, Miss Parker, 4 years old, d. p.,	50

Committee would speak in high commendation of ladies' mitts and cotton stockings exhibited.

Committee—Mrs. Henry Montague, Mrs. B. Bishop, A. B. Brown.

NEEDLE, SHELL AND WAX-WORK.

Committee find many articles entered in this department of rare and exquisite workmanship, and from the excellence of all have experienced some difficulty in making selections for premiums. Their judgment has been awarded in a spirit of impartiality, and a desire to encourage the manufacture of useful articles:

2 pair children's shoes, Mrs. Moore,	$0 50
1 pair undersleeves, Mrs. J. B. Cobb,	50
3 embroidered collars, Miss Mary Burtt,	75
2 samples silk embroidery, Mrs. G. A. Fitch,	75
Best pair slippers, Mrs. E. Bennett,	75
2d " Miss Sarah Lewis,	50
Sample of lace-work, C. Madden,	75
Best embroidered skirt, Mrs. P. Lillie,	1 00
2d " " Miss Molly A. Rice,	75
Sofa cushion, Miss Lizzie Taylor,	50
Best embroidered ottoman cover, Mrs. Dr. Hitchcock,	1 00
2d " " Mrs. Allen Potter,	75
Embroidered bedspread, Mrs. P. Lillie,	50
3 crotchet collars, Mrs. W. O. Tuttle,	75

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Best lamp-mat, Mrs. E. B. Jenks,	$0 75
2d " Mrs. W. O. Tuttle,	50
2 tidies, Mrs. S. H. Williams,	1 00
Case wax flowers, Emily Robinson,	1 00
1 case bonnets, Mrs. H. L. Morton,	1 50
1 what-not, (leather,) Mrs. P. S. Grimes,	1 00

The committee would add that many other articles entered in this department are worthy of a favorable notice, but in their opinion not entitled to premiums. They would mention as pertaining to this class: Specimen of worsted flowers, by Mrs. Chas. H. Bennett, and D. Root; 1 pair doyles, by Lizzie Taylor; 1 embroidered velvet cloak, Miss S. M. Smith; 1 needle case, Miss M. B. Huydenburk; 1 watch-case, Mrs. E. B. Jenks; 1 case bonnets, Mrs. E. Traverse; 1 basket wax fruit, A. Clark; 1 leather-work frame, ——; and several specimens of needle-work.

All of which is respectfully submitted.

Committee—Frank Little, Mrs. J. C. Seely, Mrs. Bennett.

MANUFACTURED ARTICLES.

CLASS I.

Your committee on Class I, beg leave to report:

Best pair sewed calf boots, Burdick & Hawley,	$2 00
2d " " "	1 00
Best pair kip peg boots, "	1 00
Best pair gents' gaiters, "	1 00
Best pair ladies' slippers, "	2 00
Best pair stoga boots, "	2 00
Best pair pegged calf brogans, "	1 00
Best 6 tanned kips, Wm. Waterbury,	1 00
Best 6 calfskins, "	1 00
Best 7 sides harness leather, Wm. Waterbury,	1 00
Best mittens and gloves, Potter & Windoes,	5 00

Your committee would mention as very fine, the case of boots and shoes and slippers, exhibited by Messrs. Burdick & Hawley, and as deserving of special notice, the gloves and mittens manufactured by Messrs. Potter & Windsor.

Committee—A. Latta, S. C. Briggs, S. Wheelock.

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CLASS III.

The undersigned, committee appointed to examine and report upon the quality of articles entered for exhibition in Class 3 of manufactured articles, would beg leave to make the following report:

2 seat rockaway, (no competition) J. B. Cornell, (Dis.,)	$2 00
Best covered buggy, C. S. Crittenden,	3 00
2d " "	2 00
Best open buggy, "	3 00
2d " "	2 00
Best 2 seat extra top carriage, S. C. Crittenden,	3 00
Best open buggy 2 seats, "	3 00
2d best " 2 seats, J. B. Cornell,	2 00
1 slide seat top buggy, C. S. Crittenden, (discretionary.)	
Best cutter, square box, J. B. Cornell,	2 00

The carriages on exhibition were far superior to those of last year. The premium open buggies, covered buggies, and two seat extension carriage, and the rockaway carriage, were elegant and highly finished specimens of work, and fully equal to any of foreign manufacture.

All of which is respectfully submitted.

Committee—G. Dodge, L. C. Starkey, L. F. Andrews.

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CLASS IV.

The committee on Class 4, report that very few articles came under their inspection.

Best bedstead, Carder & Ryder,	$2 00
Best specimen marble and sculpture, Geo. W. Winslow,	2 00
Best specimen house painting and graining, Rice & Allen,	2 00
Oak graining, George E. Hollister, (discretionary,)	50
Doors and sash, Dewing C. Scudder, "	1 00
Window blinds, Amos Knerr, "	1 00
Best washing machine, J. Atwater, "	50

There was no competition in marble, yet the committee deem it but justice to Mr. Winslow to award him the above premium for what they consider exquisite workmanship. There were many other articles not entered for competition, which were worthy of notice, among which was Mayhew's chimney cap, leather-work cabinet ware.

Committee—A. T. Prouty, Geo. Russell, P. S. Grimes.

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CLASS V.

The committee on stoves would respectfully report:

Best cooking stoves, Potter, Gale and Parsons,			$3 00
2d best	"	"	2 00
Best parlor	"	"	2 00
Best tin ware,		"	2 00

Best stove shovel, mill pick, chisel specimen of blacksmith work, Wm. Shakespeare, ... 3 00

A parlor cook stove exhibited by Potter, Gale & Parsons, elicited much admiration.

Committee—A. Nevins, W. C. Sabin, O. Bush.

The following persons were chosen officers of the Society for the ensuing year:

President—Eri R. Miller.

Recording Secretary—Frank Little.

Corresponding Secretary—Amos D. Allen.

Treasurer—Hiram Arnold.

Executive Committee—D. B. Webster, William H. Cobb, William Blair, H. Breese, E. T. Lovell.

FRANK LITTLE, *Secretary*.

Kalamazoo, Sept. 28, 1857.

MEETING OF EXECUTIVE COMMITTEE.

A meeting of the Executive Committee of the Kalamazoo County Agricultural Society, was held at the Court-House, on Saturday, the 26th day of September, A. D. 1857.

The following officers were present at said meeting:

ELI R. MILLER, President;
FRANK LITTLE, Recording Secretary;
A. D. ALLEN, Corresponding Secretary;
H. ARNOLD, Treasurer;
DR. F. RANSOM, Assistant Treasurer;
D. B. WEBSTER, W. H. COBB, } Executive Committee.

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Meeting called to order by the President.

Voted, That the Discretionary Premiums presented by the several Committees, be allowed as recommended.

Voted, To allow the following accounts:

A. R. Balch, for tending gate, &c., Fair of 1857,	$13 00
Lyman Tuttle, work,	2 00
C. M. Burdick, ring for center pole, and labor,	4 00
Geo. A. Fitch & Co., printing,	15 00
Fitch & Hascall, "	10 25
V. Hascall, "	12 00
H. Arnold, paid sundry bills,	5 75
F. Ransom, " "	12 13
A. D. Allen, services during Fair, and paid sundry bills,	7 40
J. F. Vernor, use of tent,	20 00
C. D. Wadhams, services during Fair, &c.,	4 00
Geo. Torrey, " (3 days,)	9 00
Gibson & Wagner, sundries,	4 15
Kidder & Drake, "	5 75
H. G. Wells, sundries, (Floral Hall,)	2 63
Martin Turner,	3 00
M. Heydenburk, sundries,	15 75
Mason & Loveland, labor,	5 00
M. Heydenburk, Order 166, paid rent of Fair ground, allowed Sept. 4, 1857,	30 97

The Treasurer, H. Arnold, made the following report:

806 membership tickets sold for Fair, 1857, at 50c.,	$403 00
33 " " (village,) at $1,	33 00
J. S. Waldron, for use of Fair ground,	65 00
2,053 single and team tickets, Fair, 1857,	267 33
Total receipts, 1857,	$768 33

Voted, To appoint a committee to audit accounts.

Chair appointed Hiram Arnold and Frank Little said committee.

The Chair appointed Frank Little a committee of one to examine and adjust the accounts of the late Treasurer.

A vote of thanks was passed to the late Secretary, O. N. Giddings, Esq., for his liberality in gratuitous services to the Society.

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Resolved, That the foregoing proceedings be submitted for publication.

Adjourned to meet the second day of the meeting of the Board of Supervisors, being Tuesday, Oct. 13, 1857.

E. R. MILLER, President.

FRANK LITTLE, Secretary.

Kalamazoo, Sept. 26, 1857.

STATEMENT of accounts audited and paid by Kalamazoo County Agricultural Society, Fair of 1857, not included in the transactions above printed.

J. S. Hulitt, use of horse for Marshal,	$3 00
J. S. Waldron, extra meals for Officers,	5 00
V. Hascall, printing,	3 00
E. G. Slaight, services in Ticket Office,	4 00
D. Arnold, " " "	4 00
S. H. Williams, hay for stock,	7 15
Kidder & Drake, livery,	2 00
Cobb & Fisher, plates broken,	1 83
E. Olney, surveying grounds,	3 00
Sweetland & Dewing, lumber,	16 34
E. Starkweather, rent of grounds,	30 00
J. R. Williams, expenses in city,	15 00
C. Earle, police,	2 00
F. Ransom, hay,	4 00
Potter, Gale & Parsons, hardware,	2 47
S. R. Balch, labor,	1 50
V. Hascall, printing for the year 1856,	12 50
A. D. Allen, fitting back on tent,	1 08
W. Shakspeare, fish-spear stolen,	2 00

KENT COUNTY.

Ninth Annual Report of the Kent County Agricultural Society.

J. P. C. EMMONS:

SIR—In accordance with the duties of this office, I herewith transmit to you a report of the transactions of the Kent County Agricultural

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Society for the year 1857. Our progress has been gradual, but with marked success, our receipts having exceeded those of the previous year by over one hundred dollars. We have perfected new articles of association, and copies filed with the county clerk and Secretary of the State Agricultural Society.

First quarterly meeting of the executive board held at the office of E. E. Sargeant, Esq., in the city of Grand Rapids, on Monday the 14th day of March, 1857.

Present, Cicero Potter, S. S. Bailey, S. V. Stedman, G. C. Fitch and L. P. Atwater.

Our worthy President, always on hand, failed this time on account of sickness; and on motion, Cicero Potter was called to preside. The proceedings of the last meeting were read and approved.

The premium list was then taken up, but for want of time was not finished. The board then adjourned to meet at the Western Hotel, in this city, on Saturday the 28th inst., at 10 A. M.

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Grand Rapids, March 28, 1857.

The executive board met pursuant to adjournment.

Present, S. S. Bailey, John Davis, G. C. Fitch and L. R. Atwater.

The proceedings of the last meeting were read and approved, and rules and regulations for the ninth annual fair as follows, were adopted. The premium list was also completed.

At the Second Quarterly Meeting of the Executive Board, held at Grand Rapids, June 17, 1857, the following rule was adopted and ordered to be added to the by laws:

Any person may become a life member of this Society, on the payment of ten dollars at any one time into the treasury, and shall be entitled to a certificate of membership, giving himself and family all the privileges and benefits of the Society.

Our Fair was held on Tuesday, Wednesday and Thursday, the 22d, 23d and 24th days of September, 1857. The Officers of the Society, and most of the Viewing Committees, were present. The first day was devoted to making entries, but owing to the inclemency of the weather but few of the articles were brought on to the ground. On the morning of the 2d day, Providence smiled on us and showed us the sun,

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and he smiled on us too. The entry book was held open until afternoon, and the entries exceeded those of last year by about one hundred. The day was devoted to receiving and arranging articles, and late in the afternoon the Judges commenced their examinations. Not the least in interest of this day's proceeding was the plowing-match. Each competitor was required to mark his land with a back-furrow, manage his own team and plow one-fourth of an acre. Five horse-teams entered for the prize. The average time for plowing was quality above quicknesss was to govern the judges, and the awards were made to T. P. Allen, Grand Rapids, 1st premium, $5 00, and Daniel Schemerhorn, Walker, 2d premium, $3 00.

A large number of visitors were on the Fair Ground, and so great was the crowd in some places, that the Judges were unable to complete their examinations until the morning of the third and last great day of the Fair, which also opened bright and fair, and early in the forenoon the walks leading to the grounds were thronged with pedestrians, all eager to see what they could see. Dinner time came, but the feast prepared for the eyes seemed to satisfy or control the physical man, and but few, if any, left the ground.

At 2 o'clock, P. M., music was heard in the distance, and such music too as can only be made by the Valley City Band. As it neared the gates, which seemed to fly open as by enchantment, the band, (for such it was,) followed by the Valley City Guards and Fire-Engine Company, No. 2, (No. 3 having visited us on the previous day,) were escorted by the President and Secretary to the Speaker's stand, where the band gave us Hail Columbia.

The next in order was the reading of the reports of the Viewing Committees.

The Rev. Mr. Greely was called forth from the crowd, (our engaged speaker having disappointed us,) and gave us, in a speech of about fifteen minutes long, more practical remarks and better ones than are often found in a regular agricultural address. The band put finis to it in the shape of Yankee Doodle.

The Rev. Mr. Smith was called, who said his name was not John Smith, neither was he an agriculturalist, yet he represented all the Smiths in christendom. His remarks were short, but to the point.

After another tune by the band, the election of officers took place, resulting as follows, viz :

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For President—HENRY SEYMOUR, Paris;
" *Secretary*—E. W. BALL, Grand Rapids;
" *Treasurer*—GEO. C. FITCH, "

Executive Committee—L. S. Scranton, Grand Rapids; Cicero Potter, Walker; W. S. H. Welton, Grand Rapids; G. S. Denison, Cascade; J. A. Simonds, Paris.

On motion of Henry Seymour,

A vote of thanks was tendered the retiring Officers, also the Valley City Guards, the Band and Fire Companies, for their attendance and entertainment.

The crowd then dispersed, with new incentives, we trust, for future actions.

The following is the List of Premiums awarded at this Fair, together with the reports of Viewing Committees.

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LIST OF PREMIUMS

Awarded at the Ninth Annual Fair of the Kent County Agricultural Society, held in the City of Grand Rapids, the 22d, 23d and 24th of September, 1857.

CATTLE.

CLASS I.

Durhams.

Best bull calf, F. D. Richmond,..... $2 00

Your committee take pleasure in saying that they consider the animal a very creditable one, and regret that there was not a fuller exhibition in this class.

R. H. SMITH,
O. H. FOOT,
JOHN BUTLER,
Committee.

—

CLASS II.

Devons.

Best bull over 2 years, P. H. Prescott,..... $5 00
2d best " " D. S. Worcester,..... 3 00

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Best cow, 4 years, D. S. Worcester,	$5 00
2d best " " " "	3 00
Best heifer, 3 years, " "	3 00
" bull, 1 year, " "	4 00
" bull calf, " "	2 00
" heifer calf, " "	2 00

R. H. SMITH,
O. H. FOOT,
JOHN BUTLER,
Committee.

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CLASS III.

Grades and Cross of Blood.

Best gr. Durham bull, 2 years, G. Reed,	$2 50
2d best " " Samuel White, jr.,	1 50
Best 1 year old " L. F. Chase,	2 00
Best Durham cow, Gibson Reed,	2 50
2d best " " Jno. Krum,	1 50
Best heifer, 3 years, Hiram Knapp,	1 50
2d best " " H. H. Allen,	1 00
Best Devon heifer, 2 years, Erastus Clark,	2 50
2d best " " O. H. Foot,	1 50
Best cow, Leonard White,	2 50
" heifer calf, Jno. Krum,	1 00

H. H. HOLDT,
HIRAM KNAPP,
O. VAN BUREN,
Committee.

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CLASS IV.

Natives.

Best pair working oxen, over 4 years, J. W. Squier,	$4 00
2d best " " " H. H. Baker,	3 00
Best steers, 3 years, O. H. Foot,	4 00
" calves, B. S. Whitman,	1 50

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Best bull, 2 years, H. B. Holbrook, ... $4 00
" cow, John Butler, ... 4 00
2d best cow, Erastus Clark, ... 3 00
Best heifer, 2 years, Andrew Loomis, ... 2 00

O. VAN BUREN,
H. H. HOLT,
HIRAM KNAPP,
Committee.

—

CLASS V.

Fat Cattle.

Best fat ox, H. H. Allen, ... $2 00
" steer, O. H. Foot, ... 2 00

O. VAN BUREN,
G. L. KNIGHT,
Committee.

—

HORSES.

CLASS VI.

Best stallion over 4 years, (Telegraph,) C. C. Norton, ... $5 00
2d best " 4 " (Black Hawk,) A. Shear, ... 4 00
Best " under 4 " Jasper Shear, ... 5 00
2d " " 4 " L. S. Scranton, ... 3 00
Best colt, 3 years old, Foster Tucker, ... 4 00
2d best 3 " " 2 00
Best colt, 2 " C. De Vrendt, ... 3 00
2d best 2 " J. W. Squire, ... 2 00
Best colt, 1 " W. S. H. Welton, ... 2 00
2d best, 1 " Geo. Weaver, ... 1 50
Best sucking colt, Wm. Ashley, Jr., ... 1 50
2d best " Geo. Weaver, ... 1 00
Best brood mare, John Butler, ... 5 00
2d best " L. S. Scranton, ... 3 00
Best match team for all work, A. Shear, ... 4 00
" " carriage, Cady & Yale, ... 4 00

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Best single carriage horse, F. D. Richmond, ... $2 00
Best saddle horse, O. H. Foot, ... 1 00

The committee would remark there were several nice colts on exhibition, and it was with some difficulty that they made the awards among the sucking colts; also a small Morgan horse which compares well with any stock horse in the country owned by Mr. W. Fisk.

A. H. HILL,
W. R. CADY,
P. TRACY,
Committ

SHEEP.

CLASS VII.

Best specimen Merino buck, C. C. Close, ... $4 00
2d best " " L. H. Johnson, ... 2 50
Best long wool buck " 4 00
2d best " Wm. Birdsall, ... 2 50
Best 5 long wool ewes, " 4 00
2d best " D. S. Worcester, ... 2 50
Best buck lamb, Hiram Knapp, ... 1 00
2d best " D. S. Worcester, ... 50
Best 5 ewe lambs, Hiram Knapp, ... 2 00

The committee regret that the competition in this class was no greater. Those to whom premiums are awarded, the committee deem well worthy the same. The committee would recommend as worthy of notice, some Spanish Merino bucks entered and owned by W. B. Holbrook, Esq.

H. SEYMOUR,
HARRY ROGERS,
SHELDON ASHLEY,
Committee.

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SWINE.

CLASS VIII.

Best Suffolk boar, H. B. Hine,	$4 00
Best litter pigs, Jas. Nesbit,	2 00
2d best " H. B. Hine,	1 00

S. R. BEAL,
D. M. WATSON,
Committee.

POULTRY.

CLASS IX.

Best coop Bramahs, J. M. Sligh,	$1 00
Best turkeys, H. H. Allen,	1 00

DANIEL SEYMOUR,
H. H. ALLEN,
E. BEMENT,
Committee.

TOOLS AND IMPLEMENTS FOR FARMERS.

CLASS X.

Best 2 horse thimble arm wagon, Wm. Edmonson,	$4 00
" ox yoke and bows, Ball & Chubb,	75
" whiffletrees and neck yoke, Ball & Chubb,	75
" mop stick, W. N. Cook,	25
" horse rake, Ball & Chubb,	1 50
" 2 horse cultivator, Ball & Chubb,	1 50
Best corn-cultivator, Ball & Chubb,	75
" straw-cutter, " "	1 50
" breaking-up plow, Ball & Chubb,	1 50
" stubble plow, (Curtis,) " "	1 00
" corn " (shovel,) " "	75
" harrow, Ball & Chubb,	1 00
" subsoil plow, Dean & Atwater,	1 50
" sod " " "	1 00
" hay-rigging, for wagon, J. D. Alger,	75
" fanning-mill, W. B. Renwick,	2 00

We invite farmers to examine it.

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Best clover-seed-gatherer, J. D. Alger,	$1 00
" roller for general use, Ball & Chubb,	1 50
" clover or grass-seed-planter, Ball & Chubb,	75
" 1 doz. brooms, T. F. Richards,	1 00
" ½ doz. hand-rakes, J. P. Weeks,	50

JOHN BUTLER,
E. U. KNAPP,
B. F. MARTINDALE,
Committee.

MECHANICS.

CLASS XI.

Best 2-horse top carriage, D. Aspinwall,	$5 00
" 1-horse " " Wm. Edmonson & Co.	3 00
" 1-horse open " D. Aspinwall,	2 50
" cutter, D. Aspinwall,	1 00
" fancy bedstead, Wm. T. Powers,	1 00
" sofa, C. C. Comstock,	1 00
" fancy chairs, "	1 50
" ½ M. shingles, Granger & Co.,	75
" 25 brick, Charles Barclay,	50
" pannel door, T. Treadwell,	1 00
" window-sash, "	50
" window-blinds, Eggleston & Kelley,	50
" ½ doz. milk-pans, J. McCrath,	25
" milk-pail, with strainer, "	25
" lot tin-ware, Foster, Martin & Co.,	50
" 6 joints stove-pipe and elbow, Foster, Martin & Co.,	50
" copper furniture, Foster, Martin & Co.,	1 00
" specimen dentistry, L. A. Rogers,	1 00

Mr. W. B. Renwick, of this city, exhibited a very splendid article having the appearance of a piece of cabinet furniture for the parlor, the upper part of which is a milk-safe, the lower part a nicely got up refrigerator; but as this article is not named in the List of Premiums, it was not entered as such, although every way worthy. The Com-

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mittee would recommend the article, not only as a beautiful piece of furniture, but a very useful one.

G. S. DEAN,
J. O. FITCH,
Committee.

FLOUR, BREAD, BUTTER, CHEESE, SUGAR AND HONEY.

CLASS XIII.

Best June butter, J. C. Rogers,	$2 00
2d best " D. Schemerhorn,	1 00
Best fall butter, E. Clark,	2 00
2d best " "	1 00
Best cheese, H. H. Allen,	1 00
2d best " "	75
Best sage cheese, J. W. B. Smith,	1 00
2d best " T. Dean,	75
Best maple-sugar, (grained,) S. S. Bailey,	1 00
2d best " B. C. McVane,	75
Best " (caked,) S. S. Bailey,	1 00
2d best " " A. Loomis,	75
Best baker's bread, J. Carson,	50
Best baker's crackers, Scribner & Son,	50
" domestic bread, W. W. Anderson,	50
" " crackers, T. P. Allen,	50
" corn bread, "	50
" barrel flour from 4 20-60 bushs wheat, A. H. Camp & Co.	1 00
" 10 lbs. honey, H. H. Allen,	75
" 2d best " G. W. B. Smith,	50

GEO. KENDALL,
MRS. GEO. KENDALL,
MRS. C. POTTER,
Committee.

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DOMESTIC ARTS.

CLASS XIV.

Best 8 yards wool carpet, Mrs. T. H. Lyon,	$1 00
" quilt, Mrs. W. H. Anderson,	50
" knit ladies' hose, J. P. Weeks,	25
" cotton socks, Mary Durfee,	25
" specimen knitting, by a girl under 12 years, Miss Clara A. Close,	50
" woolen socks, S. W. Pearsall,	25
" mittens, D. S. Wooster,	25
" stocking yarn, Morgan Hunting,	50
" woolen " T. Dean,	50

J. O. FITCH,
MRS. G. S. DEAN,
MRS. CICERO POTTER,
Committee.

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CLASS XV.

Best ottoman cover, Miss M. J. McCray,	$0 25
" worsted work, E. W. Winchester,	2 00
" chair tidy, Miss A. W. Martindale,	25
" ornamental work, Mrs. V. B. Gaskitt,	1 00
" collection wax work, J. D. Gue,	50
" leather work, V. B. Gaskill,	50
" embroidery, Mrs. S. C. Smith,	50
" lace cap, Mrs. A. M. Schemerhorn,	25
" silk bonnett, "	50
" Misses' hat, "	25
" collection of artificial flowers, J. Kendall & Co.,	50
" straw hat, J. Kendall & Co.,	50

The committee further report that they find many articles properly belonging to this class for which no premiums are offered, among which are three kinds of embroidery, to wit: cambric, muslin and silk; and your committee would recommend that premiums be offered for the different varieties in order that justice may be done to all parties. And your committee report that they also found a great variety of

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work properly belonging to Class 15, on exhibition, but not entered for competition, that are richly entitled to premiums, among which are a silk embroidered scarf belonging to Miss M. A. Farnham; also a ladies' street basque exhibited by J. Kendall & Co. Your committee regret the extreme modesty of the exhibitors, and hope that another year they may enter the list with competitors.

E. S. EGGLESTON,
MRS. A. F. ATWATER,
MRS. E. S. EGGLESTON,
Committee.

—

CLASS XVI.

Best specimen of portrait painting, M. Hunting,			$2 00
" animal in oil	"	"	1 00
" landscape	"	"	1 00
" cattle drawing,		"	1 00

A beautiful specimen of oil landscape, a winter scene, worthy of special notice. To the artist, Miss Malla Kingsbury, a young lady of Grand Rapids, the committee unhesitatingly recommend a discretionary premium of 1 00

Best single ambrotype, O. H. Horton, ... 1 00

" and largest variety of ambrotypes, O. H. Horton, ... 2 00

" photograph, and a most superb and decidedly good specimen, the Committee would recommend a discretionary premium, O. H. Horton, ...

Two very fine photographs of Esq. Moore and lady, are worthy of favorable mention. A large and fine specimen, worthy of notice, A. C. Alger. An ambrotype on tin, a good picture, L. Buel.

Best crayon sketch, (a lad 11 years of age,) L. C. Earl, ... 50

P. R. L. PIERCE,
MRS. WM. HOVEY,
MISS S. E. MORSE,
Committee.

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CLASS XVII.

Best and largest variety of cultivated flowers were the 55 varieties exhibited by Mrs. S. L. Withey, Grand Rapids.

Best hand bouquet, Mrs. Wm. J. Welles, ... $0 75

" floral ornament is the beautiful white lilly in the Bohemian vase.

Best and greatest collection dahlies, Mrs. G. C. Nelson, ... 50

" " varieties pansies, Mrs. W. J. Welles, ... 50

" basket flowers, with handle, Mrs. A. H. Botsford, ... 1 00

30 varieties verbenas worthy of special notice, and the Committee are unanimous in recommending discretionary premiumns, Mrs. W. J. Welles.

Best specimen, and the only one, of roses, evidently "the last rose of summer," Mrs. Geo. Kendall.

Best and most hardy and the largest collection of house-plants, very attractive and fine, Henry Allen, ... 1 00

Best floral design, indicating taste in arrangement and a harmonizing of delicate tints, Mrs. W. J. Welles, ... 1 00

An elegant vase of wax-fruit, of several varieties, worthy of special notice, and displaying much skill and taste, Mrs. J. D. Gue, ... 50

P. R. L. PIERCE,
MRS. W. HOVEY,
MISS S. E. MORSE,
Committee.

SEEDS AND VEGETABLES.

CLASS XVIII.

Best bushel seed wheat, Lovel Moore, ... $1 00

2d best " " C. Close, ... 50

Best rye, L. Moore, ... 1 00

" oats, E. H. Woodward, ... 50

" barley, S. S. Bailey, ... 50

" timothy seed, S. M. Pearsall, ... 1 00

" trace seed-corn, S. V. Steadman, ... 50

" " white corn, D. Schemerhorn, ... 50

" " dent " J. C. Wenham, ... 50

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Best trace seed King Phillip corn, O. H. Foot,	$0 50
" " sweet-corn, H. B. Holbrook,	50
" " blood beets, Henry Allen,	50
" " sugar " H. B. Holbrook,	50
" " turnip, rooted, J. Escott,	50
" " carrots, Rufus Paine,	50
Best parsnips, E. H. Woodward,	50
" salsify, T. Dean,	50
" bagas, J. D. Alger,	50
" globe turnips, H. H. Holbrook,	50
" cabbage, H. Seymour,	50
The three varieties of cabbage, the red, the oxheart, and the savoy, exhibited by H. Seymour, are worthy of a premium of	1 00
Best ½ peck Lima beans, O. Van Buren,	1 00
" 1 peck onions, from seed, W. P. Barker,	50
" " " from setts, C. Close,	50
" " " setts, S. S. Bailey,	50
" specimen of Chinese sugar-cane, G. L. Knight,	50
" peck sweet potatoes, H. Seymour,	50
" " potato onion, J. D. Alger,	50
" ½ bushel potatoes, for family use, H. Allen,	50
" " " for general use, A. Loomis,	50
" 10 stalks celery, H. Seymour,	50
" pie-plant, H. Allen,	50
" 5 pumpkins, H. B. Holbrook,	50
" marrow squashes, "	50
" Mexican cream squashes, Henry Allen,	50
" black Spanish watermelon, J. D. Alger,	25
" orange watermelon, H. Seymour,	25
" pineapple melon, "	50
" nutmeg " "	50

The specimen of vegetable egg, exhibited by H. Seymour, are worthy of premium for their novelty. The high bush cranberries cultivated in his garden; the five varieties tomatoes, among which the large smooth is a superior article; the four varieties squashes; in short, the large amount of excellent vegetables exhibited by the enterprising

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gardener, entitle him to the thanks of this Society and a suitably compensating reward.

The entire exhibition of seeds and vegetables reflects great credit upon all those who have taken an interest therein, and may well excite the envy of the riotous eater of flesh.

J. C. ROGERS,
A. LOOMIS,
A. H. BOTSFORD,
Committee.

FRUIT.

CLASS XIX.

Best 8 varieties autumn apples, F. Dean,	$1 50
2d best 8 " " S. R. Pearsall,	1 00
Best winter apples, S. R. Pearsall,	1 50
2d best " D. Schemerhorn,	1 00
Best variety pears, G. C. Nelson,	1 00
2d best " W. J. Welles,	75
Best plums, G. C. Nelson,	1 00
2d best " W. P. Barker,	75
Best peaches, E. U. Knapp,	1 00
2d best " P. H. Prescott,	75
Best doz. autumn apples, B. F. Martindale,	50
" winter " S. V. Steadman,	50
" autumn pears, G. C. Nelson,	50
" peaches, W. P. Barker,	50
" plumbs, G. C. Nelson,	50
Best 6 bunches Isabella grapes, D. Hatch,	50
" " Sweetwater " A. Platt,	50

G. C. NELSON,
A. H. HOVEY,
Committee.

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PLOWING.

CLASS XX.

Best plowing, T. D. Allen, ... $5 00
2d best " D. Schemerhorn, ... 3 00

M. HUNTING,
G. H. DENISON,
J. A. SIMONDS,
Committee.

The Executive Board of the Kent County Agricultural Society met at the office of the Secretary, on Wednesday, December 23, 1857.

Present, W. S. H. Welton, G. C. Fitch, S. S. Bailey, S. V. Steadman, Cicero Potter, and Secretary.

It will be seen that the Board was not full—which fact may be accounted for, probably, by the bad state of the roads—some of the members living quite a distance from the place of meeting. Perhaps, too, they thought they had spent all the time "pro bono publico" that they could afford. There being a quorum, the meeting was called to order by the President and proceeded to business.

A settlement was had with the President, and his note taken for one hundred and twelve and 50-100ths dollars ($112 50).

On motion, a committee, consisting of S. S. Bailey, W. S. H. Welton and H. Seymour, was appointed to draft by-laws to harmonize with our new articles of association.

The in-coming President was requested to take bonds from the Secretary and Treasurer.

The Secretary was authorized to draw an order, countersigned by the President, on the County Treasurer, for the amount allowed the Society by the Board of Supervisors, the same to be appropriated on the payment for land.

On motion, a vote of thanks was tendered by this expiring Board to the ex-President, for his manifest zeal and energy in the prosecution of his duties as President of this Society.

L. R. ATWATER,
Secretary.

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This Society first organized in the town of Walker, in the year 1849, by a few of the farmers of that and adjacent towns, has now a membership of over two hundred. It has made a purchase of 34 acres of land, adjoining the city of Grand Rapids, at $100 per acre, upon which has been paid, principal and interest, fifteen hundred and eighty-seven dollars, leaving a balance of twenty-one hundered and thirty-three dollars, which falls due as follows: One hundred, January 1st, A. D. 1858; two hundred and thirty-three, January 1st, A. D. 1859, and one thousand eight hundred and sixty, March, A. D. 1864; and, with the co-operation of the farmers of this county, it may be paid for, and our Society continue as it has been, second to none in the State. We feel a pride in the contemplation that our grounds will be paid for, and when duly and truly prepared, we shall have the pleasure of welcoming the State Fair to the enjoyment of our hospitalities.

Thus has closed the business of the Kent County Agricultural Society for the year 1857. How well its affairs have been managed, is left to its members and the citizens of the county to determine. That everything has been done for the best is not assumed; but the official Board resign their trust with an assurance that, while it has been one of no small responsibility and labor, yet it has been performed with that cheerfulness that has shown an interest in all that pertains to the welfare of the Society.

L. R. ATWATER,
Secretary.

AMENDED ARTICLES OF ASSOCIATION OF THE KENT COUNTY AGRICULTURAL SOCIETY.

Whereas, On the 21st day of December, A. D. 1855, William S. H. Welton, Jonathan F. Chubb, Sluman S. Bailey, Timothy E. Wetmore, George M. Barker, Andrew Loomis, George C. Fitch, Lansing K. Jenne, J. W. B. Smith, Benjamin B. Church and Justus C. Rogers, under and in accordance with Act No. 89, of the Session Laws of 1855, organized themselves into an Agricultural Association known as the Kent County Agricultural Society;

And whereas, By the prospective increase in the number of the members of said Association, it is manifest that the business of said Society cannot be done under said original Articles of Association, ac-

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cording to the requirements of the statute under which said Association was organized, for the reason that the number of the Executive Officers of said Association will be larger than is permitted by said statute;

And whereas, The undersigned, to wit: William S. H. Welton, Jonathan F. Chubb, Sluman S. Bailey, George M. Barker, Andrew Loomis, George C. Fitch, Lansing K. Jenne, J. W. B. Smith, Justus C. Rogers, Benjamin B. Church, Morgan Hunting, Cicero Potter, Stephen V. Stedman, John Davis and Luman R. Atwater are the only persons at present members of said Association, and are all inhabitants of the County of Kent, and State of Michigan;

Now therefore we, The persons aforesaid, have made and entered into, and by these presents do make and enter into amended Articles of Association, as follows:

1st. The name of this Association shall be "The Kent County Agricultural Society," by which name it shall be known in law.

2d. The object of this Society shall be "the promotion of Agriculture and all its kindred arts."

3d. The Officers of said Society shall be a President, Secretary Treasurer, and five Directors; and said Officers shall constitute a Board for the management of the concerns of said Society; a majority of whom shall constitute a quorum.

4th. The President of said Society for 1857, is WILLIAM S. H. WELTON; Secretary, LUMAN R. ATWATER; Treasurer, GEORGE C. FITCH; and the Directors, MORGAN HUNTING, CICERO POTTER, SLUMAN S. BAILEY, STEPHEN V. STEDMAN and JOHN DAVIS.

W. S. H. WELTON,
L. R. ATWATER,
G. C. FITCH,
CICERO POTTER,
STEPHEN V. STEDMAN,
GEORGE M. BARKER,
L. K. JENNE,
ANDREW LOOMIS,
MORGAN HUNTING,
SLUMAN S. BAILEY,
BENJAMIN B. CHURCH,
JONATHAN F. CHUBB,
JUSTUS C. ROGERS,
JOHN DAVIS,
JOHN W. B. SMITH.

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STATE OF MICHIGAN, } ss.
County of Kent, }

Before me, a Notary Public for said County, personally appeared, on the ninth day of March, A. D. 1857, Luman R. Atwater, George C. Fitch, Cicero Potter and Stephen V. Stedman, and on the tenth day of June, A. D. 1857, W. S. H. Welton, and on the fifteenth day of June, A. D. 1857, George M. Barker, and on the seventeenth day of June, A. D. 1857, Lansing K. Jenne, Andrew Loomis, Morgan Hunting and Sluman S. Bailey, and on the twenty-seventh day of June, A. D. 1857, Benjamin B. Church, and on the thirtieth day of June, A. D. 1857, Jonathan F. Chubb, and on the eighteenth day of July, A. D. 1857, Justus C. Rogers, and on the eleventh day of August, A. D. 1857, John Davis, and on the seventh day of September, John W. B. Smith, severally known to me to be the persons who signed the foregoing articles, and acknowledged the same to be their free and voluntary act for the purpose therein specified.

A. BAXTER,
Notary Public for Kent County.

ANNUAL REPORT OF THE SECRETARY OF THE LENAWEE COUNTY AGRICULTURAL SOCIETY FOR 1857.

There were, at the Annual Fair, 701 entries for Exhibition and Premiums.

The number of Premiums awarded was 274.

The whole amount of money awarded on these 274 Premiums, is $563 75.

Of this $563 75, there was awarded—

To the Township of	Fairfield,	$ 53	50
" "	Rome,	22	50
" "	Maddison,	45	50
" "	Raisin,	39	50
" "	Franklin,	61	00
" "	Rollin,	10	50
" "	Dover,	31	75
" "	Tecumseh,	78	50
" "	Adrian,	50	00

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To the Township of Palmyra,		$29 00
" " Cambridge,		11 00
" " Blissfield,		5 00
" " Ogden,		4 00
" " Macon,		1 00
" " Ridgeway,		11 00
" City of Adrian,		121 00
		$563 75
Of these 274 Premiums, 248 have been called for, and for which the Secretary has drawn upon the Treasurer to the amount of		525 75
Leaving 26 Premiums not yet called for, and not paid, which are entitled to draw		$38 00

—

RECEIPTS AND EXPENDITURES.

The funds and receipts of the Society for the year 1857, have been as follows:

Cash on hand at the last annual meeting,		$450 86
Received from the County Treasury,		84 02
Receipts of the last Annual Fair,		683 40
Total receipts and funds of 1857,		$1,218 28

Expenditures.

Expenses incurred in 1856, paid in 1857—		
Balance of Secretary's salary,	$20 00	
Taylor's account and postage,	2 00	
Use of hall to hold annual meeting,	3 00	
		$25 00
Premiums of 1856, paid in 1857,		48 00
Current expenses of 1857, which have been paid,		388 59
Amount paid Northern Lenawee Agricultural Society, pursuant to resolution of Executive Committee, on 15th October last,		168 04
Amount paid on 248 Premiums awarded at last Fair,		525 75
		$1,155 38

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Expenses incurred in 1857, and yet unpaid—	
S. P. & A. Jermair, account for printing,	$22 50
Twenty-six Premiums awarded at last Fair and unpaid,	38 00
Ingals & Mills, account for printing,	2 00
Total payments and expenses of 1857,	$1,217 88

—

The Items of payments, expenditures and liabilities incurred since the last Annual Fair, are as follows:

Expenses incurred in 1856, and paid in 1857,	$25 00
Premiums awarded in 1856, and paid in 1857, amount to	48 00
Current Expenses.	
S. P. & A. Jermain, account for printing 1,500 catalogues,	23 00
Geo. F. Payne, " " binding " "	7 50
Post bills of Annual Fair,	50
J. R. Bennett's account for preparing grounds for Annual Fair, and services during Fair,	30 30
Chas. H. Eddy, account for expenses incurred at Fair,	10 88
Bodwee, Carey & Co.'s account for articles furnished at Fair,	4 05
Wilcox & Chappel, " " "	5 25
Geo. Kingsley, account Clerk at Fair, 1 day,	1 50
S. S. Ludlum, " " "	1 50
J. B. Allen, " " "	3 00
Benj. L. Skinner, " for fencing Fair Ground,	250 00
Postage paid by Secretary,	1 11
248 Premiums of the Fair of 1857 paid,	525 75
Secretary's salary for 1857,	50 00
Amount paid Northern Lenawee Agricultural Society,	168 04
Total amount paid,	$1,155 38
Liabilities incurred and unpaid—	
Twenty-six Premiums awarded at last Fair and unpaid,	38 00
S. P. & A. Jermain's account for printing handbills and badges, tickets, &c., and for cards,	22 50
Ingals & Mills, for printing notice of annual meeting,	2 00
	$1,217 88

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Recapitulation.

Total funds and receipts of the Society for 1857,		$1,218 28
Total payments made and liabilities incurred by the Society for 1857,		$1,217 88
Surplus of receipts over payments and expenditures of 1857, is,		$0 40

—

The present liabilities and indebtedness of the Society are—

Twenty-six unpaid Premiums of the last Fair,		$38 00
S. P. & A. Jermain, for printing, &c.,		22 50
Ingals & Mills, for printing for 1856,	$3 00	
" " " 1857,	2 00	
		5 00
Account allowed Frotts & Miller for livery at Fair of 1856, not yet called for, and not paid,		3 00
Unpaid per centage on the Premiums of 1855,		245 62
Twenty-three Premiums of 1855, not called for and no part paid,		38 69
Total unpaid liabilities,		$352 81
The unpaid expenses of 1857, are,		$62 50
The unpaid expenses of the Society previous to the year 1857, amount to		290 31
		$352 81

—

On the first day of January, 1857, there was in the County Treasury the sum of $710 90, raised by tax in 1853 for Agricultural purposes. There was also in the County Treasury, at the same time, the sum of $233 41, raised by tax of 1856, for Agricultural purposes. These two funds amounted in the whole to $944 31.

The Board of Supervisors, at their meeting in January, 1857, directed that where Township Societies had been formed, and had held a Fair, that the Treasurer of the County Agricultural Society should pay to such Society or Societies the amount of the above fund which was raised by tax in such township or townships.

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Under this direction the Executive Committee of this Society, at its meeting on the 15th of October last, passed a resolution instructing the Secretary to draw on the Treasurer of the County Society, in favor of the Northern Lenawee Agricultural Society, for that part of the fund of 1853 which was raised by tax in the Townships of Raisin, Franklin, Tecumseh and Ridgeway.

Accordingly, there has been paid to the Northern Lenawee Society the sum of $168 04, that being the amount which was raised by tax in 1853, in the four Townships composing the Northern Lenawee Society.

ANDREW HOWELL,
Secretary.

Adrian, 30th December, 1857.

LIST OF PREMIUMS

Awarded by the Lenawee County Agricultural Society, at the Annual Fair, held in the City of Adrian, October 7th and 8th, 1857.

ON FARMS, GARDENS AND ORNAMENTAL TREES.

For cultivated farm, Mr. Osgood, ... $5 00

ON BLOOD CATTLE.

Devon Bull, three years old and over.

1st premium, Alex. Millet, ... $6 00
2d " Austin Caruthers, ... 5 00
3d " D. Todd, ... 3 00

Devon Bull, one year old.

2d premium, D. Todd, ... 2 00

Devon Cow, three years old and over.

1st premium, John Richards, ... 5 00
2d " Eber Adams, ... 3 00
3d " David Ramsdell, ... 2 00

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DURHAMS.

Durham Bull, three years old and over.

1st premium,	James B. Wells,	$5	50
2d "	William Beal,	5	50
3d "	W. R. Briggs,	3	00

Bull, two years old.

1st premium,	John Wheling,	5	00

Bull, one year old.

1st premium,	W. D. Page,	3	00
2d "	John M. Merrit,	2	00

Bull Calf.

1st premium,	A. R. Tafts,	2	00
2d "	Thomas Briggs,	1	00

Durham Cow, three years old and over.

1st premium,	Jas. B. Wells,	5	00
2d "	Thomas Briggs,	3	00
3d "	W. D. Page,	2	00

Cow, two years old.

1st premium,	A. U. Sutton,	4	00
2d "	W. D. Page,	2	00

Heifer, one year old.

1st premium,	Thomas Briggs,	3	00

Heifer Calf.

1st premium,	Orrin Hoxie,	2	00
2d "	Jas. B. Wells,	1	00

CROSSES OF BLOOD CATTLE.

Bull, 3 years old or over, Devon and Durham.

1st premium,	Philo C. Mills,	$6	00

Bull Calf.

1st premium,	Blake C. Griffin,	2	00
2d "	Philo C. Mills,	1	00

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Cow, 2 years old or over, Devon and Durham.

1st premium,	Jas. B. Wells,		$5 00
2d "	" "		3 00
3d "	D. C. Blair,		2 00

Heifer Calf.

1st premium,	John Richards,		2 00

ON GRADE AND NATIVE CATTLE.

Yearling Bull.

1st premium,	T. R. Lovett,		$2 00

Cow, 3 years and over.

1st premium,	W. A. Hall,		5 00
2d "	Elijah Allis,		3 00
3d "	H. S. Hoxie,		2 00

Two-year-old Heifer.

1st premium,	Elijah Estis,		3 00
2d "	Morgan Williams,		2 00

Yearling Heifer.

1st premium,	Charles O. Cropot,		1 00

Heifer Calf.

1st premium,	Philo C. Mills,		1 00

ON WORKING OXEN AND FAT CATTLE.

Working Oxen, 4 years old and over.

1st premium,	John Hoeg,		$6 00
2d "	J. E. Mason,		4 00
3d "	Eber Adams,		2 00

Three-year-old Steers.

1st premium,	J. W. Keeny,		4 00

Two-year-old Steers.

1st premium,	R. H. Kinney,		3 00
2d "	Joseph Bowerman,		2 00

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One-year-old Steers.

1st premium, A. O. Hall, ... 2 00
2d " J. W. Keeny, ... 1 00

Pair fat Oxen.

1st premium, J. Thomson, ... 4 00

Fat Cows.

1st premium, A. D. Hall, ... 2 00

ON HORSES.

HORSES FOR ALL WORK.

Stallion, 4 years old and over.

1st premium, (Bussorah,) B. J. Bidwell, ... $6 00
2d " Warren Gilbert, ... 5 00
3d " G. W. Perry, ... 3 00

MARES FOR ALL WORK.

Breeding Mares, 4 years old and over.

1st premium, A. S. Berry, ... $6 00
2d " Eli Sparhawk, ... 5 00
3d " Jabez Fisk, ... 3 00

BLOOD HORSES.

Stallion, 4 years old and over.

1st premium, (Gen. Gifford,) B. J. Bidwell, ... $6 00

BLOOD MARES.

Breeding Mares, 4 years old and over.

1st premium, J. B. Allen, ... $6 00

FARM AND CARRIAGE HORSES.

Span of Horses for all work.

1st premium, P. & H. Swords, ... $6 00
2d " A. Phillips, ... 4 00

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Single Gelding for all work.

1st premium, Ira Bidwell, ... $3 00
2d " Philander Rogers, ... 2 00

Span matched Carriage Horses.

1st premium, C. G. Millet, ... 6 00
2d " H. Randolph, ... 4 00

Single Carriage Horse.

1st premium, A. Barnard, ... 3 00
2d " W. H. Waldby, ... 2 00

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THREE-YEAR-OLD COLTS.

Stallion, 3 years old.

1st premium, Thomas Underwood, ... $4 00
2d " Halsey Lewis, ... 3 00

Best Mare, 3 years old.

1st premium, Aaron Loomis, ... 3 00

Best Gelding, 3 years old.

1st premium, W. D. Page, ... 4 00

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TWO-YEAR-OLD COLTS.

1st premium, B. Holloway, ... $3 00
2d " Chas. L. Thomas, ... 2 00

—

ONE-YEAR-OLD COLTS.

1st premium, John Miller, ... $2 00
2d " Halsey Lewis, ... 1 00

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SPRING COLTS.

1st premium, Jabez Fisk, ... $2 00
2d " Wm. More, ... 1 00

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ON SHEEP AND WOOL.

Spanish Merino Buck, over 2 years old.

1st premium, Sylvanus Kinney, ... $3 00
2d " E. C. Wilbur, ... 2 00
3d " " " 1 00

French Merino Buck, over 2 years old.

1st premium, A. J. Hunter, ... 3 00

Long wool Buck, over 1 year old.

1st premium, Geo. H. Gazely, ... 3 00
2d " " " 2 00
3d " " " 1 00

Pen of long wool Ewes.

1st premium, N. Woodford, ... 4 00
2d " Geo. H. Gazely, ... 3 00

Pen of 5 grade wool Ewes.

1st premium, W. A. Hall, ... 4 00
2d " P. C. Mills, ... 3 00

Pen of 5 French Merino Lambs.

1st premium, A. J. Hunter, ... 4 00

Pen of 5 long wool Lambs.

1st premium, N. Woodford, ... 4 00

Pen of 5 grade wool Lambs.

1st premium, W. A. Hall, ... 4 00

ON SWINE.

Suffolk Boar.

1st premium, Joshua Taylor, ... $3 00
2d " " " 2 00

Suffolk breeding Sow and 5 Pigs.

1st premium, J. R. Clark, ... 3 00
2d " Samuel A. Todd, ... 2 00

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Essex Boar.

1st premium, A. J. Dean, ... $3 00

Boars of other breeds.

1st premium, H. A. Grover, ... 3 00

2d " L. D. Meach, ... 2 00

Breeding Sow with 5 five Pigs or more.

1st premium, B. J. Harvey, ... 3 00

2d " Daniel Todd, ... 2 00

ON POULTRY.

Best lot of Shanghais, Austin Caruthers, ... $1 00

" Brama Pootras, T. H. Tooker, ... 1 00

" Geese, Philo C. Mills, ... 1 00

" white Turkeys, H. A. Grover, ... 1 00

" white Shanghais, H. S. Hoxie, ... 50

ON FARM IMPLEMENTS.

Best harrow, Chas. M. McKenzie, ... $2 00

" cultivator, Francis Van Doren, ... 1 00

" farm wagon, Thomas Cummings, ... 3 00

" wheat-drill, G. F. Loghler, ... 2 00

" hay-rigging, Ebenezer Bassett, ... 2 00

" straw-cutter, Chas. M. McKenzie, ... 2 00

" stump-machine, F. Traxler, ... 2 00

" grain-cradle, B. J. Bidwell, ... 1 00

DOMESTIC MANUFACTURES.

CLASS I.

Best 5 yards diaper, Mrs. Elijah Allis, ... $2 00

" 10 yards domestic plaid or stripe, J. W. Benedict, ... 2 00

2d best " " " Joel Osgood, ... 1 00

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Best pound white stocking-yarn, J. W. Keeney,	$0 50
" mixed " " J. W. Keeney,	50
Best pair woolen blankets, Mrs. Nancy Miller,	2 00
2d best " " Moses Bowerman,	1 00
Best 10 yards woolen cloth, J. W. Benedict,	2 00
" " rag-carpet, Mrs. Edmund Hall,	2 00
2d best " " Mrs. E. L. Selleck,	1 00
Best 10 yards flannel, Mrs. Elijah Allis,	2 00
" pair knit woolen stockings, Mrs. N. Miller,	1 00
" " " socks, Chas. Mickley,	75
" " " mittens, Mrs. D. W. Mapes,	50
" dress-coat, by B. J. Bidwell,	2 00

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CLASS II.

Best side upper-leather, B. J. Bidwell,	$1 00
" six calf-skins, " "	1 00
" three kip-skins, " "	1 00
" side harness-leather, " "	1 00
" 2-horse carriage-harness, R. Bidleman,	2 00
" 1-horse " " " "	2 00
" harness for farm, " "	2 00
" bridle, R. Bidleman,	50
" side saddle, (foreign manufacture,) R. Bidleman,	Dip.
" saddle, " " " "	Dip.
" trunk, R. Bidleman,	1 00
" single-soled calf boots, B. J. Bidwell,	1 00
" coarse boots, " "	1 00
" kip " " "	1 00
" women's boots, " "	1 00
" shoes, " "	1 00
" bureau, F. R. Stebbins,	2 00
" bedstead, " "	2 00
" set chairs, " "	2 00

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CLASS III.

Best 2-horse carriage, Thomas Cummins,	$4 00
2d best " " " "	3 00
Best 1-horse carriage, W. H. Waldby,	3 00
2d best " " Thos. Cummins,	2 00
Best 100 brick, Chas. McKenzie,	1 00
" drain-tile, Richard King,	1 00
" specimen carriage trimming, Thos. Cummins,	2 00

BUTTER, CHEESE, HONEY AND BREAD.

Best sample of butter, Mrs. Z. Cook,	$3 00
2d best " " John M. Merrit,	2 00
3d best " " Mrs. B. J. Harvey,	1 00
Best lot cheese, T. H. Bailey,	3 00
2d best " S. Horton,	2 00
3d best " A. S. Berry,	1 00
Best maple sugar, Nathan A. Ramsdell,	2 00
2d best " G. D. Bascomb,	2 00
Best lot honey, N. A. Ramsdell,	2 00
2d best " Israel Pennington,	1 00
Best 5 lbs. white bread, Mr. G. Gage,	50
" " crackers, J. W. Helme,	50

VEGETABLES AND SEEDS.

Best and greatest variety vegetables, John Clark,	$2 00
2d best " " " W. D. Ramsdell,	1 00
Best 12 carrots, W. D. Ramsdell,	50
" 12 table beets, Philo C. Mills,	50
" 12 onions, S. S. Davis,	50
" 3 cabbage, W. D. Ramsdell,	50
" 12 tomatoes, John Clark,	50
" 12 sweet-potatoes, David Ramsdell,	50
" 12 ears seed-corn, Samuel Jordon,	50
" 2 pumpkins, S. Aldrich,	50

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Best ½ peck Lima beans,	A. G. Eastman,	$0 50
" ½ bushel table potatoes,	W. Sawdry,	50
" ½ " " turnips,	S. Aldrich,	50
" ½ peck peas,	W. D. Ramsdell,	50
" 2 squashes,	Charles Bassett,	50
" 12 vegetable oysters,	John Clark,	50
" ½ bushel barley,	B. J. Bidwell,	50
" ½ " winter wheat,	L. Cook,	1 00
" ½ " oats,	Joel Osgood,	50
" ½ " buckwheat,	W. A. French,	50
" ½ " rye,	B. J. Bidwell,	50
" peck timothy-seed,	B. J. Bidwell,	50
" peck clover-seed, " "		50

ON PLOWING.

1st premium,	(with horses,)	B. J. Bidwell,	$5 00
2d "	"	W. V. Wimple,	3 00
3d "	"	Thomas Taylor,	2 00

ON LADIES' EQUESTRIANISM.

1st premium,	Miss Hellen Stone,	$15 00
2d "	Miss Esther Cross,	10 00
3d "	Miss Sue Stone,	5 00

FLOWERS, DRAWINGS AND PAINTINGS.

Best painting in oil,	W. R. Wheeler,	$2 00
" water-color photograph,	J. A. Foster,	1 00
" photograph, in oil, " "		1 00
" daguerreotype, " "		1 00
" animal painting, in oil,	C. Bradish,	2 00
" oil painting, Mich. artist,	A. F. McKenzie,	1 00
" specimen statuary,	Peters & Hall,	1 00
" specimen penmanship,	W. D. Cochran,	1 00

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Best collection of perpetual roses, B. F. Steer, ... $1 00
" " cut flowers, Miss C. Ormsby, ... 1 00
" " verbenas, Ira J. Thurston, ... 1 00
" " green-house plants, Mrs. P. Higby, ... 1 00
" " bouquet, Samuel Baylis, ... 1 00
" monochromatic painting, Miss R. A. Holman, ... 1 00
" specimen penciling, Miss S. A. Jennings, ... 1 00
" " crayon drawing, Miss Emily Pruden, ... 1 00
" " Grecian painting, Francis A. McKenzie, ... 1 00
" Oriental sign and flower painting, W. Wintermute, ... 1 00

ORNAMENTAL NEEDLE AND SHELL WORK.

Best white quilt, Daniel Todd, ... $2 00
2d best " Mahala Cornell, ... 1 00
Best worked bed-quilt, B. J. Bidwell, ... 2 00
2d best " " Mrs. G. A. Bond, ... 1 00
2d best patch-work quilt, Wm. Older, ... 1 00
Best bonnet, Mrs. J. Handy, ... 1 00
" ottoman cover, Emily Terry, ... 1 00
" group of flowers, H. A. Thompson, ... 1 00
" lamp mats, Mrs. F. J. Remington, ... 1 00
" worked slippers, W. A. Hall, ... 1 00
" ornamental leather-work, Miss Lucy Hodge, ... 1 00
" worked under-sleeves, Mrs. S. R. Kenyon, ... 1 00
" hearth-rug, Jesse Cram, ... 1 00
2d best " Mary Thompson, ... 50
Best wax-flowers, Mrs. S. R. Kenyon, ... 1 00
" stocking-darning, Miss A. Rogers, ... 1 00
2d best " " Miss Almira Briggs, ... 50
Best specimen mosaic work, Miss Sue H. Dayton, ... 1 00
" crotchet tidy, Hattie A. Thompson, ... 50
" crotchet collars, Clara E. Drury, ... 50
" worked skirt, Mary Thompson, ... 1 00
2d best " " Helen S. Davis, ... 50
Best knit shawl, Miss Clara Lathrop, ... Dip.
" watch-case, A. F. McKenzie, ... 50

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MISCELLANEOUS ARTICLES.

Washing-machine, M. L. Pruden, ... $1 00
Portable farm-fence, Ezra Cole, ... 50
Lot of mechanics' tools, of foreign manufacture, but of excellent finish, Wilcox & Chappell, ... 2 00
Two melodeons, J. R. Smith, ... 3 00
One dozen broom-handles, J. D. Banta, ... 50
Lot of wagon spokes, Wm. Nixon, ... 1 00

The Committee in this department also examined some fine specimens of syrup from the Chinese sugar-cane, exhibited by William TenBrook and John Merritt, and the Committee recommend that the Society, at some subsequent meeting, award premiums to such persons as shall present worthy specimens of the article, together with a statement of the process of manufacture, expense and quantity that can be produced from a given amount of ground.

ON FRUIT.

Best and greatest collection of Fall and Winter Apples.

1st premium, T. H. Bailey, ... $3 00
2d " Samuel Sotrop, ... 2 00
3d " A. U. Sutton, ... 1 00

Six varieties Winter Apples, six each.

1st premium, Wm. TenBrook, ... 3 00
2d " Calvin Crane, ... 2 00
3d " A. U. Sutton, ... 1 00
Best single variety fall apples, E. Bassett, ... 1 00
" " " winter apples, Jesse Stretch, ... 1 00

Greatest collection of Fall and Winter Pears.

1st premium, D. K. Underwood, ... 3 00
2d " W. H. Scott, ... 2 00
3d " B. J. Harvey, ... 1 00

Six varieties of Pears.

1st premium, D. K. Underwood, ... 3 00
2d " B. J. Harvey, ... 2 00

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3d premium, W. H. Scott, ... $1 00
Best single fall variety of pears, David Horton, ... 1 00
Best single variety of winter pears, D. K. Underwood, ... 1 00

Greatest display of Peaches.

1st premium, W. H. Scott, ... 3 00
2d " B. L. Crane, ... 2 00
3d " B. J. Harvey, ... 1 00
Best single variety peaches, A. G. Eastman, ... 1 00

Greatest variety of Grapes.

1st premium, W. H. Scott, ... 3 00
2d " J. A. Chandler, ... 2 00
3d " D. K. Underwood, ... 1 00
Best table grape, W. H. Scott, ... 1 00
" variety for cultivation in open air, W. H. Scott, ... 1 00
" " of foreign grapes grown in open air, D. K. Underwood, ... 1 00
Best 12 quinces (orange,) G. L. Crane, ... 2 00
2d best " " W. H. Scott, ... 1 00
Best green-fleshed melon, " " 1 00
" yellow " " " " 1 00

The Executive Committee also awarded two premiums on specimens of syrup from Chinese sugar-cane, as follows:

1st premium, Wm. Ten Brook, ... 1 00
2d " John M. Merritt, ... 50

ANNUAL ADDRESS,

Before the Lenawee County Agricultural Society, October 8, 1857.
By B. L. Baxter, Esq., of Tecumseh.

LADIES AND GENTLEMEN:—

There was a time, some two thousand years ago, when, while its inhabitants were occupied with war and conquest, the fair fields of Italy fell into neglect, and agriculture at Rome was held in disrepute.

The natural consequences of this soon made themselves manifest throughout the length and breadth of the land, and even distant and

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newly acquired provinces began to exhibit its like baneful effects. Rome was at this time mistress of the world. Unrivalled in military power, and scarcely yielding to the still classic Greece in letters, her rulers and statesmen saw with apprehension and regret, this fatal mildew, thus settling down upon her future hopes.

Her young men, no longer content to labor in the field, rushed into the army, and into all the dissipations of city life, while her maidens no longer plied the distaff, nor sat patiently at the loom, but made haste to spend the fortunes which their fathers had wrested by conquest from other lands, in luxury and dress.

Rome was indeed glorious, but well her statesmen knew that Rome, without Italy, could not endure, and this garden of the world was fast becoming an uncultivated waste. The days of patriotic yeomanry and independent agricultural pride, seemed to have well nigh passed away and the time to be rapidly impending when slaves alone should till her soil.

The result of this state of popular sentiment was then what it always has been, and must be until the end of time. No pursuit, no matter how important or indispensable even it may be to the wants of man, can flourish under such an incubus as this. And from the remedy then proposed and employed, we may learn a like lesson of wisdom and experience.

The Roman Cæsar, consulting with the best and wisest statesman of the Empire, determined to correct this public evil, by first attempting to correct the public sentiment from which it sprang. Imperial fields were cultivated, and imperial honors were bestowed alike upon plebian and patrician husbandmen. Rome's proudest generals and statesmen were taken from the field, her orators and poets spake and sang in praise of rural life.

Under the direction and immediate patronage of the powerful Mæcenas, the great Virgil wrote and published his inimitable Georgies, containing in sweet flowing numbers the best and wisest maxims of the age for the successful management of farm and herd, of flock and fold, the garden and the field. And as a result of this, we are informed by history, that scarcely a quarter of a century had elapsed ere Italy had resumed its beautiful fertility, and Rome its former and more permanent prosperity.

The memory of many now before me will easily run back to a period

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of not unlike agricultural depression, arising, too, from causes not entirely dissimilar. It will require no long stretch of memory, and none at all of the imagination, to look back upon a time when, here also, labor in the fields was, if it be not even now, too much regarded as servile and degrading. When our young men were rushing into the professions, no matter how over crowded they were, nor how poor an encouragement they might offer for even a competent support; into the stores, where clerkships, with their continuous rounds of monotonous, unintellectual duties, afforded scarcely a hope of promotion or improvement; into anything and into everything, so that they might only escape the drudgery of the farm.

Nor were the young men alone in this. The ladies too, who always, and of right, take the lead in all matters of fashion or taste, but too manifestly placed a like low estimate upon the labors of the field. The hardy hand of healthful, honest toil, found no favor with them, when compared with the sleek and soft effeminacy of the more fashionable pursuits. And even the very parents themselves, now grown old and rich in agricultural toil and industry, by a most strange infatuation drinking in of the same popular idea, and tamely accepting for themselves the meed of undeserved inferiority, seemed with a like eagerness to rival each other in seeking for their sons and daughters a way of escape from their own chosen pursuits.

The effect of such a perversion of popular sentiment, could not but be most deeply and injuriously felt—felt both upon the character of our youth and upon the agricultural interests of our land. And so it was, and is, even here to-day.

That such a sentiment is, and was without foundation in fact, or in common sense, it is needless to assert.

Agriculture was man's first pursuit, ere he had lost by sin his Maker's smile, and when for pastime only, he tilled the garden of Eden, beside the banks of the Euphrates. It was honored then, for in the cool of the evening, when the labors of the day were done, he talked with his Maker face to face. It was of the firstlings of the flock that Abel offered up the sacrifice approved of God. The early Patriarchs sought from the field and fold their honors and wealth.

Our Mother Earth was given us as a rich inheritance from heaven, to gather from its fertile soil by patient industry, a full supply for all our wants. Can there be anything mean or degrading in putting forth

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the hand to pluck what all must have, and what the Only Wise and Only Bountiful has placed within our reach? The product of the soil is the source, and only source of a permanent wealth or national prosperity, the wide world over. Was it meant, think you, only for slaves? It is the base of commerce—the base of manufactures—the base of science, and the base of art. Without it, they could none of them exist. Shall they then look down in scorn upon the *alma mater* from which they all alike derive their nourishment?

Agriculture is the natural condition of man, where other things being equal, his entire energies and character are and may be best developed. That it is one of the best health-developing employments in which men engage, the statistics of the world have ever shown. And this, too, in a day and age when it is pursued not in any strict accordance with the recognized laws of health, but oftentimes in contravention of them; when it is pursued not so much as a natural and rational enjoyment as it is as a continuous and productive drudgery. And yet even under all these unfavorable circumstances, it offers for the inspection of mankind a cleaner bill of health, and a more vigorous life than almost any other business or employment known to science.

Its healthful and varied pursuits also promote a fuller and more perfect physical development than can anywhere else be found. This is a conceded fact, and will not be denied. It is also an equally obvious fact, though perhaps not so fully understood nor appreciated, that health and physical energy are an essential element in intellectual development, which no amount of study or mental culture can substitute or supply. The mind acts only through the organism of the body. The brains and nerves are just as essential to give power and energy to thought, as is the mind itself. They are in fact part of the mind, without an adequate development of which, however much informed or enlightened it may be, it is imperfect and comparatively powerless. It is a mistake then, and one into which but too many of our youth have most unhappily fallen, that agricultural pursuits are not well adapted to the highest development of mind and cultivation of native talent.

We do not of course intend to assert that continuous unremitting toil upon the farm, scarcely more than anywhere else, would tend to mental cultivation. A certain amount of relaxation from physical toil is of course in any condition essential to this. But what we do assert, is, that there is no physical employment which better developes the

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physical, and energises the mental powers of man. And more than that; without a good physical development, induced by frequent and active exercise, the mind cannot attain its clearest perceptions nor its highest powers.

Labor is a physical necessity of our being. Entailed upon us as a curse, yet such have we ourselves become by that same sad lapse whose irrecoverable fiat has passed alike upon nature and on man, that doubly cursed are those who would now seek to escape its inexorable penalties. Without it we cannot be happy. Without it we sink into ennui, effeminacy and insignificance.

And yet it is none the less true that an excess of labor tends to a like enervation and insignificance. The supposed necessity for this has been for the most part the foundation for an opinion that agricultural pursuits are not favorable to mental development. But the fact is there is no such necessity in the case, but on the contrary any such idea is of itself a most unfortunate mistake. The experience of human industry will show that those whom avarice, or even a sense of stern necessity, has driven on from day to day and from year to year, in one continuous round of unremitting toil, while adding thus to their own feebleness and discomfort, have at the same time quite overreached the mark with the regard to gain.

While they are thus seeking to secure certain ends or gains by an excess of labor, it will be found that some less grasping but more thoughtful neighbor, has contrived in some way or other to save a material portion of this excess of toil, and still secure the same, if not superior results.

It may be by better informing himself with regard to the comparative demand and supply of certain crops, it may be by better discovering and learning how to supply certain defects in the soil; it may be by procuring for his use better implements, or better stock, better seed, or a better rotation of crops, or in short by a thousand ways and means against which any increase of toil, to the utmost extent of human endurance, must in vain attempt successfully to compete.

I know that there is a general prejudice against book-farming as for the most part Utopian and unprofitable. And so it is when it leads only to theorizing and experiment. But when theory and practice are both tested by experimental results, and guided by a well informed

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judgment and sound common sense, there is no department of human labor where men have been able to produce more magnificent improvements.

It was a sadly erroneous dogma, but one adhered to with a pertinacity that almost defied investigation or disproof, "that Agriculture was a field forever closed to science—open only to toil. A field in which theory was madness and experiment folly; in which routine was the only wisdom, and any departure from it a mark of incapacity."

No wonder that such a dogma as this, and followed also but too faithfully, should have enstamped at length upon this noblest and best of human pursuits, a comparative impress of inferiority and servitude.

But that day, and that unworthy impress, has, we trust, well nigh passed away. In spite of prejudice, and in spite of opposition, thinking men, and men of science, have given themselves up to the correction and investigation of the many evils and blunders of this interminable routine, and that, too, with an earnestness of zeal and fullness of success that is revolutionizing the general sentiment, and subverting general practice of the agriculture of the world. If experiment is folly, then one common madness is fast possessing the entire population, and that, too, with an advantage and success far in advance of the sagest wisdom of other years.

Science has been called in, and most successfully too, to lend her aid to increase the productiveness, and lessen the weariness of toil. Whatever may have been thought or said before, it is now beginning to be understood that there is very little danger that men will either read, or think, or know too much, to farm successfully. It is true, that the result of early experimental failures, has passed into a popular prejudice against this kind of farming, but it is a prejudice that is fast passing away before an almost universal experience; and there is some consolation in the belief that if it will not die out in the broad light of practical science, it must ere long be starved out in an unequal competition with a more intelligent and better directed labor.

I will not now dwell upon the many and important practical improvements in Agriculture so successfully developed within the past few years. I will not speak of the agricultural science, books, tracts and magazines now placed within the reach of every one, and giving to them all, at slight expense, the benefit of their united wisdom and experience, and more than this, the advantage of all the blunders and

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losses of other years. I will not enlarge upon the beneficial influences of Agricultural Societies, such as yours is, and has been, in developing the resources and wealth of the country, and introducing emulation and improvement into every department of agricultural labor. Nor will I, as I most certainly might with propriety and pleasure, descant in eulogistic terms upon the agricultural display this day made within your enclosures, and the indications which it gives of the wealth, intelligence and enterprise of the farmers of Lenawee—not because these topics are unworthy of notice, but because your attention is often called to them by far abler and more experienced men, and their more direct and remunerative tendencies you are not soon likely either to forget, or cease to cultivate; but still more because there is another, and a more purely literary and intellectual department of this subject, towards which I desire, at this time, more particularly to invite your attention.

I refer to a consideration of how far the erudition of literature and science, and the refinements of taste and art, may be properly and profitably connected with agricultural pursuits.

We have seen that there is no foundation in fact, nor in the character of the employment itself, for any prejudice, or estimate, placing this department of labor, in point of dignity or respectability, upon a level below any other pursuit in which men are or can be engaged. That it is, and must ever continue to be, the substantial base and foundation of all human prosperity. That as it is one of the most natural, so it is one of the most healthful of industrial pursuits, and perhaps from its diversity of employment in the open air, the very best calculated for a thorough and perfect physical and intellectual development.

That any depression of its character or interests has been rather the result of a want of self-appreciation, reliance and intelligence, than of any influences or causes from without. That in this, as in every other department of human industry, whether physical or mental, "the fault is not in our stars, but in ourselves, that we are underlings." That just so soon as any employment or profession shall learn to respect itself, it need no longer fear for the respect or estimation of the world.

We have alluded to a time when agriculture was not in this country held in the same repute as now, and to the more immediate influences that have brought about the change. We would not place any limits to the extent to which the same influences may be made conducive to improvement in the same direction.

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But to our mind, productiveness is not the only thing in matter to be looked after or desired. We know that this is the utilitarian view of the subject, and therefore the one most in vogue with the community at large. Yet while we would, in all reasonable ways, and to any reasonable extent, seek to increase the productiveness of agricultural or any other labor, we would also at the same time, and even at some slight expense of profit, seek to add what we could to its attractiveness and intelligence.

As we have seen, and as the history of the world and of human nature cannot fail to demonstrate, it must always be the intelligence of those engaged in it that will give dignity or character to any pursuit. And further, it must also be the comfort and pleasure with which men may engage in and pursue it, that will allure and hold to its ranks the thinking and intelligent, thus giving dignity and character to its prosecution.

It is to our mind a sad spectacle, and one not by any means calculated to increase our estimate of human nature, to see men over-tasked or held to an uncongenial or unhealthful employ by a sense of gain alone. We never could be led to endorse so base a prostitution of all the higher, nobler purposes of human life.

Reason as we may, it is not all of life to accumulate hoarded wealth nor can its acquisition alone secure the sum of human happiness. An intelligent estimate of the scope and resources of a human existence, or even an intelligent observation of human experience, would lead almost any one to a widely different conclusion. That it will not best subserve our own interest to toil only for wealth, we can readily understand, and that it is not by any means certain, nor indeed scarcely calculated to promote the permanent happiness or prosperity of our children, the history of many a ruined family and disappointed hope, more than sufficiently attests. And yet such is the tenacity and weakness of human nature in this direction, that all sense of personal discomfort, and all the teachings of a melancholy experience seem well nigh lost upon us.

Is it not then reasonable and proper for us to inquire, how far it is possible and practicable to add to the leisure and intelligence, the comforts and refinements of agricultural life, without too much encroaching upon either its productiveness or necessary toil?

We have seen that toil, however severe, if at the expense of intelli-

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gence, is seldom productive. It must also be admitted that mere intelligence, without labor, will produce nothing. But the great question is, how far intelligence may be combined with labor so as to give its greatest pleasure and dignity to the one, and its greatest productiveness to the other.

We shall assume that every intelligent mind would prefer to add to its employments, whatever, without conflicting with its general results, will add to its resources, character and enjoyments. That whether pecuniarily profitable or not, there is to every one, if prepared to receive and appreciate it, an elevated and ennobling enjoyment in the gratification of a refined and cultivated taste, or the resources of an expanded and well-informed mind.

We know that there is a severe and ascetic philosophy that would reduce everything to the unvarying criterion of dollars and cents, allowing to human nature no gratification or indulgence, save such as may be dictated by an absolute and inflexible necessity; but with such a sentiment as this we readily discard all sympathy, for we believe it pertains rather to the enslavement than the benefaction of the race.

Now Agriculture we believe to be a field alike suitable and appropriate for the successful cultivation of letters and science, refinement and taste. That this can be done in a manner not inconsistent with its other appropriate duties, at the same time adding greatly to its enjoyments, attractiveness and influence.

It is true that leisure is necessary to improvement in this direction but so it is to study and improvement everywhere. And it is also true, as we have seen, that constituted as man is, or at least has been made to be by the fall, absolute leisure, divorced form labor, is only a curse. Where then can the two, each so essential to the perfection of the other, be more happily or more profitably combined than upon the farm?

The fact is that even now, as arranged and managed almost without reference to this, our farmers have more absolute leisure for reading and general study than any artisan, mechanic, or profession. Outside of his profession, the active lawyer, clergyman or physician has very little time for general reading, and it is only by most scrupulously husbanding every leisure moment which he has, that he can keep himself informed of the current literature of the day. Our merchants, clerks, mechanics and artisans, have if possible even less time for this.

We know that most of our farmers feel that the toil and labors of the

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day are such as to leave when they are done, no energy or disposition for reading or study, but that their leisure hours are all needed for rest or sleep. But there is no need for any such overstraining and overtasking as this; nor do we do our own selves or our children justice when we commit ourselves or them to any such round of unremitting toil. As we have seen before, we scarcely gain pecuniarily by it; and taking the whole life as it is, we become thereby in reality greatly the losers. We neither subserve their interests nor ours when we thus overtask the physical at the expense of the mental powers. Both have their place, and should receive their appropriate share of time. As we have seen before, there is both pleasure and economy in this. Labor thus directed, loses at once all its character of drudgery, and becomes a healthful, pleasure-giving, thought-invigorating exercise. It rises to the dignity of science, and all the true but untitled nobility of a manly independence.

Let us not be understood as in any degree advocating idleness or even an elegant leisure, in its more effeminate sense. There is no such thing as utter rest in this restless world. The workers are the winners everywhere. But there is, according to our theory, work for every one to do besides mere physical toil; nor do we believe that it was ever meant that some should do all the physical and others all the mental labor of the world.

It is a sickly and unnatural state of things, that would confine any man, or any class of men, to either of these alone. And least of all should our farming community lay out for themselves this annual excess of overwork, as they are so much inclined and accustomed to do, instead of only so much as they and their families can do easily and well. And most of all can they and should they, best improve their leisure hours, not in idleness, but in the study of nature, the researches of science, reading and mental culture.

Do they say or feel that they cannot afford the time or means for this? A moment's consideration will convince us that it is not necessarily so. There are very few of our farmers who are not from year to year laying by, or investing in some way, larger or smaller sums, which it is their purpose ultimately to leave as an inheritance to their children. And even where this is not the case, while the improvements of art have almost doubled, and oftentimes more than trebled to us the product of a given amount of labor, an increased extravagance of living

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and dress, has kept an even pace with every increase in income. Like the manna of old which the Jews gathered in the wilderness, they who gather little find nothing wanting, and they who gather much have nothing left. Fashion has become the hungry vortex into which it is all alike absorbed.

Now there is no one who can doubt that by a sensible and judicious retrenchment of superfluous expense only, ample means and leisure for mental culture could be made easily accessible to all. Nor can any reflecting mind for a moment doubt that industrious habits and a well informed cultivated intellect, is by far the safest and richest inheritance that any parent can leave to his children.

Better, a thousand times better, leave them penniless with these, and with a healthful respect for the industry and economy by which competence is won, than without these, and without experience, but in their place a senseless, contumelious contempt for anything but extravagance, and an undisguised scorn for all industrial pursuits, with all the hoarded wealth of a toiling lifetime.

Let me not be thought Utopian. I would not underrate the utilities nor even the necessities of agricultural life. They have their place and ought not to be disregarded. But while according to these their due importance, I would also find both leisure and means for the intellectualities and refinements, that may appropriately elevate and adorn it. As we value its interests, let us learn to turn it not only to pecuniary account by seeking to increase its revenues, but let us also seek to elevate it, by adding to its intelligence and refinement.

Let us cultivate it not only as a means of competence to ourselves, whereby to accumulate wealth to be afterwards devoted to other and more honorable pursuits, but rather as an employment and a profession for ourselves and for our children's children.

Let us make our homes attractive with all the adornments of science and art properly within our reach. Let us not count that expenditure a loss which hangs our walls with paintings, or fills our libraries with books; which gives to our children the delicate pencilings of art, or the sweet tones of music, which leads them to divide in pleasing alternation, the labors of the field with the murmurs of the grove, the tending of the fields with antiquated lore.

What father, think you, might not be justly proud of such a home as this, or could be made to feel that the leisure afforded to his children

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for such pursuits was lost, or the expense incurred in placing them within their reach was thrown away? Is it no source of pleasure to the lassitude of declining years, to know that the eyes of your children even in distant lands, turn ever yearningly towards the patrimonial halls which it has been your lifelong pride to ornament and adorn; the pleasant grounds you used to cultivate; the garden walks you tended; the old library, whose well-stored shelves afforded exhaustless resources of knowledge and thought to them and you, and to that cheerful fireside where pleasing converse and unhidden glee, relieved with welcome zest the weariness of toil.

To know that you have made your home a consecrated spot to all beneath its roof, a place where memory loves to linger, left by your children as they issue forth upon life's rugged paths, with sadness and regret, returned to ever with a fondness and delight.

Such a place ought every home to be, and most of all, the farmer's. He dwells with nature; and well may he gather all the sweet beauties of nature around his dwelling place. The forests are his. The noblest and most beautiful of her waving trees should shade his rest. The fields are his, and the poetry of the stars looks down in silence upon them from above.

Alone upon the farm, or in the wood, he has ample time for communing with himself, with nature and with God. As the atmosphere is pure about him, uncontaminated with all the reeking impurities of the city, so the moral atmosphere which he breathes is, for the most part, free from the taint and corruption that festers in the crowded marts of men. In the midst of rural employments he is, for the most part, freed from the allurements and temptations which they offer from without, while he feels and knows that there is no eye turned upon him, save that All Seeing one that slumbers not.

The influence of all this is to purify the mind and heart, and to refine the soul. Industry does this. Converse with nature does it. The cultivation of intelligence does it. No wonder then that the honest integrity, the truthfulness, and freedom-loving patriotism of our farmers should have passed into a proverb.

Now the same outward influences that have given character and probity to the parent, will exert an equal happy and healthy control over the destinies of the child.

Hence, it has always been admitted and understood, that for the cul-

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tivation of those sterner virtues with which human character is adorned, the farm is, of all places in the world, the safest and fittest place for the training of children. But the misfortune of it has too often been that parents, misunderstanding or disregarding the advantages and dignity of their calling, have not desired their children to follow in their footsteps, but have hastened them away into other and less safe pursuits, or by neglecting to provide for their intellectual wants, have driven them away, to secure otherwhere what they had better learned at home.

Parents and farmers of Lenawee, allow and receive the few simple suggestions which I have thus sought to urge upon your attention. You will not understand me to propose or desire the incurring of large or inconvenient expense, nor any serious retrenchment of important and necessary labor. It is only needful that parental thought and conversation should be turned in this direction, and the leisure hours and sports of your children guided into these channels, to bring about for the most part the results desired. You are not called upon to sacrifice, but only to appreciate. To give, if you but only would, the same amount of thoughtful attention and expense to the cultivation and refinement of your little ones that you now give, and that too neither improperly nor unprofitably, to the improvement of your farms and stock, and you will have introduced into your happy homes, before another ten years shall have passed away, a sweet intelligence and taste, content and nobleness of thought, that all India's gold could not buy.

We need not be told that a picture hung upon the wall is a simple thing, yet every time the eye is turned upon it its impress is left upon the mind until, while even as yet we heed it not, the gentle taste and delicate refinement of which it is so fitting an exponent, has become an elemental portion of our very being, its quiet beauty an ever present joy.

So, too, let music lend her charms to soften and refine; let Botany unfold the treasures of spring; Astronomy the majesty and beauty of the skies; Geology the mysteries of earth; let Chemistry economise the soil, and poetry and literature lend sweetness and intelligence to weariness and labor; let architectural proportion add its beauty without expense, and rural refinement its sweetness without cost, and ere you are aware, your quiet homes are sylvan in repose, and classic in adornment, and thinking heads, and beating hearts, and lofty souls, are gathered round your humble firesides.

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LAPEER COUNTY.

No report received from Lapeer County.

LIVINGSTON COUNTY.

To R. F. JOHNSTONE, ESQ.,
Secretary Michigan State Agricultural Society:

SIR,—The Fifth Annual Fair of the Livingston County Agricultural Society, was held at Howell, Tuesday, Wednesday and Thursday, October 6, 7 and 8, 1857.

The programme of proceedings was in accordance with the "order" as published with the Premium List herewith transmitted. Although the weather was fine at the time of the Fair, the attendance was not as large as usual, owing mainly to the fact that it was held just at the time of the greatest panic in money matters—just at the time of the "*crash*" of so many of the banks, and the "*wreck*" of the fair prospects of so many a business-man. And yet, the Fair was not a failure, nor anything like it. Indeed, it was quite as successful as the most sanguine had any reason to expect. Our receipts were about $450—mostly for membership tickets—the price of which is, for new members, one dollar, and for those who were members the year previous, seventy-five cents.

Our expenses for the Fair were unusually large, for at that time the "hard times" had not effected the price of labor or materials.

There were entries made in all the different classes, except that of Foreign Sheep. The total number of entries being 660. In the different classes of horses, there were 111 entries, being a decided increase from the previous year. In the classes of cattle, sheep, farm implements, grain, fruit and vegetables, there was also an improvement in quantity and quality.

For the first time since the organization of the Society, the certificate required by law was filed with the County Clerk, and the Board of Supervisors were called upon to levy a tax for the benefit of the Society. This they did, to the amount of 1-20 of a mill upon the dollar of the aggregate valuation of the property of the County, giving the Society the sum of $168. This amount has carried us through the "crisis"—

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enabled us to pay all premiums awarded, and other indebtedness. With prudence and economy we hope to go on successfully, and shall for the year 1858, rather increase than diminish the amount of our offered Premium List.

On the last day of the Fair the Society was favored with an address by Prof. Calvin Tracy, of the Agricultural College. It was a sound, practical address and well received.

The annual meeting of the Society for the election of Officers, is held at the time of the Fair, but our Society-year commences on the first Monday in January following.

With the Premium List herewith transmitted, you have the list of Officers for 1857. The following is the list elected at the time of the Fair of 1857, for the year 1858:

President—Hon. N. G. ISBELL.

Secretary—E. F. BURT.

Treasurer—ODELL J. SMITH.

Executive Committee—Francis Monroe, Ira Jennings, S. G. Ives, J. Kenyon, jr., E. N. Fairchild.

Vice Presidents—one for each town—Brighton, J. Cranson; Conway, David Bush; Cohoctah, Alva Preston; Deerfield, J. Scully; Green Oak, Hannibal Lee; Genoa, Chas. Benedict; Handy, Marvin Gaston; Hamburg, D. B. Power; Hartland, C. L. Crouse; Howell, S. M. Yerkes; Iosco, J. H. Wilcox; Marion, Hiram Wing; Oceola, S. I. Miller; Putnam, F. Webb, jr.; Tyrone, J. W. Ingram; Unadilla, S. G. Ives.

The Executive Committee, together with the President and Secretary, constitute the Board of Directors, who have the management and direction of most of the doings of the Society.

The amount of Premiums awarded at the Fair of 1857, was $450.

I enclose a copy of the Premium List, with the Rules and Regulations, and Order of Proceedings, and a copy of the List of Premiums awarded.

And have the honor to be, sir,

Very respectfully,

Your obedient servant,

E. F. BURT,

Secretary.

Howell, August, 1858.

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LIST OF PREMIUMS,

Awarded at the Fifth Annual Fair of the Livingston County Agricultural Society, 1857.

FARM AND FIELD CROPS.

CLASS I.

Best 1 acre corn, 127 bush. ears, Wm. Placeway, Transactions of 1854, and..... $2 00

Best 10 acres corn, not harvested, W. A. Hall.

Best 1 acre of oats, John W. Richmond, (not harvested.)

Best 1 acre of oats, A. Wakeman, (not threshed.)

Best farm, 200 acres, Joseph Rider, Jr.

Your committee have not, all of them, had a chance to examine the farm entered by Mr. Rider; but, from good information received, and an examination by one of the committee, we find that Mr. Rider's system of management is good; his buildings are good; fences and gates all in excellent order; marshes well drained; and your committee do not hesitate to recommend Mr. Rider's system of management as an example for the farmers of Livingston county to work after. We are of the opinion that the rules of the Society preclue him from drawing a premium, as he has received the first and second premium heretofore.

Your committee failed to receive notice of their appointment in time to make a personal examination of certain swamps and marshes which have been entered, and request that the time may be extended to the 15th December next, to report on them.

AUSTIN WAKEMAN,
ALVA PRESTON,
JAS. M. MURRAY,
Committee.

NOTE.—In those cases where the crops are not harvested or threshed the awards will be made by the Directors in January next.

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WORKING OXEN AND STEERS.

CLASS II.

Best 5 yoke oxen from one town, J. W. Botsford, ... $5 00
Best yoke oxen, 5 years old or upwards, J. W. Botsford, Youatt & Martin, and 2 00
2d best yoke oxen, 5 years old or upwards, J. W. Botsford, Patent Office Report, and 1 50
3d best yoke oxen, 5 years old or upwards, Goorge Lawrence, Patent Office Report, and 1 00
Best yoke oxen, 4 years old, L. C. Crittenden, Patent Office Report, and 2 00
2d best yoke oxen, 4 years old, H. H. Norton, Patent Office Report, and 1 50
Best yoke 3 year old steers, Warren Chase, Trans. of 1855, and 1 50
2d best yoke 3 year old steers, J. K. Weller, Transactions of 1855, and 1 00
Best yoke 1 year old steers, L. E. Beach, Jr., ... 1 50
2d best yoke 1 year old steers, W. B. Curtis, ... 1 00

FAT CATTLE, SHEEP AND SWINE.

CLASS III.

Best fat ox, George R. Hoyt, ... $3 00
Best fat cow, P. L. Reed, ... 2 00
Best fat hog, Francis Hardy, ... 2 00

THOROUGH BRED CATTLE AND CROSSES OF FULL BLOOD.

CLASS IV.

Best bull, 5 years old, Devon, J. Brown & Co., ... $5 00
Best bull, 3 or 4 years old, cross of Devon and Durham, A. Wakeman, ... 5 00
2d best bull, 3 or 4, Devon, Wm. Placeway, ... 3 00
Best bull, 2 years old, cross of Devon and Durham, J. Cranson, 4 00
2d best bull, 2 years old, Durham, C. W. Burwell, ... 2 50

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Best bull, 1 year old, Durham, D. B. Power,	$3 00
2d best bull, 1 year old, Durham, Gov. Bingham,	2 00
3d " 1 " cross of Devon and Durham, R. H. Bennett,	1 00
Best bull calf, cross of Devon and Durham, L. C. Crittenden,	2 00
Best cow, 4 years old or over, cross of Devon and Durham, A. Wakeman,	3 00
2d best cow, 4 years old or over, cross of Devon and Durham, L. C. Crittenden,	2 00
3d best cow, 4 years old or over, cross of Devon and Durham, L. C. Crittenden,	1 50
Best 3 year old heifer, Devon, E. Buckel,	3 00
2d best 3 year old heifer, Devon, D. B. Power,	1 50
Best yearling heifer, cross of Devon and Durham, D. B. Power,	1 50
2d best yearling heifer, Devon, D. B. Power,	1 00

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GRADE CATTLE.

CLASS V.

Best bull, 3 years or over, Gilbert Demerest, Youatt and Martin and	$2 00
2d best bull, 3 years or over, Calvin Wilcox,	2 00
Best bull, 2 years old, E. Barnard, Patent Office Report and	2 00
Best yearling bull, C. Van Keuren,	2 00
2d best yearling bull, Geo. R. Hoyt,	1 25
Best cow, 4 years or over, J. H. Galloway,	2 50
Best 3-year-old heifer, E. Buckle,	2 00
Best 2-year-old heifer, J. Rider, jr.,	1 50
Best yearling heifer, A. Wakeman,	1 50
Best heifer calf, H. H. Norton,	1 00
2d best " D. Case,	75

The Judges awarded the 1st and 2d premiums for bull calves, but as they made a mistake in the numbers, it is impossible for the Directors to tell which were meant. If the error can be corrected, the awards will be paid.

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NATIVE CATTLE.

CLASS VI.

Best cow, 4 years or over, F. Hardy, ... $2 50
2d best " " " 1 50
Best yearling heifer, Edward Parker, ... 1 50

FOREIGN CATTLE.

CLASS VII.

Durham bull, 6 years old, W. Murray, ... $5 00

There were other entries in this class, but as the animals were "grade," no premium can be awarded under the rules of the Society.

HORSES.

CLASS VIII.

Best stallion, 4 years or over, (Black Hawk,) N. A. Smith, Diploma and $6 00
2d best stallion, 4 years or over, (Don Juan,) J. C. Vanderhoof, 4 00
3d best " " " (Bacchus Fox Hunter,) T. A. Holloway, Trans. of '53 and 2 00
Best 3-year-old, (Duroc,) R. Bigham, jr., Trans. of '53 and 2 00
Best 2-year-old, (Champion,) Wm. Basing, ... 3 00
2d best " Daniel Harpley, ... 2 00
3d best " (Blood,) H. H. Gridley, ... 1 00
Best yearling, H. N. Lewis, ... 2 00
2d best " Wm. McCauley, ... 1 00

CLASS IX.

Mares and Colts.

Best brood mare, 4 years or over, H. H. Norton, fav. noticed and awarded a Diploma, under the rules of the Society, the same mare having received the 1st premium at the two last Fairs.
2d best brood mare, 4 years or over, S. W. Twitchell, ... $3 00

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3d best brood mere, 4 years or over, F. J. Lee,	$2 00
4th best " " " H. N. Lewis,	1 00
Best mare, 3 years old, Chas. Coleman, Diploma and	3 00
2d best " " Ely Barnard,	2 00
3d best " " Freeman Fishbeck,	1 50
Best mare, 2 years old, J. M. Larrue,	2 00
2d best " " " "	1 25
3d best " " J. J. Livermore,	75
Best gelding or mare, 2 years old, Alex. Monroe,	2 50
2d best " " " Geo. McDowell,	1 50
3d best " " " Alex. Monroe,	1 00
Best colt, 1 year old, E. Browning,	2 00
Best colt under 1 year old, L. E. Beach, jr.,	2 00
2d best " " B. Holt,	1 25
3d best " " S. W. Twitchell,	75
Best 5 colts under 1 year old, sired by one horse, N. A. Smith,	4 00

[One of the above colts was awarded a premium under another entry.]

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CLASS X.

Matched and Single Horses.

Best pair matched horses, 5 years or over, Geo. S. Lee, Dip. and	$5 00
2d best " " " " D. Jackson,	3 00
3d best " " " " J. Cranson,	2 00
Best pair matched 4-year-olds, S. G. Ives, Dip. and	4 00
2d best " " W. Sexton,	2 00
Best pair matched 3-year-olds, Wm. Placeway, Dip. and	3 00

No. 637. Pair matched horses, 3 years old, Lyman Clark, fav. noticed, but not awarded a premium, for the reason that only one belonged to the exhibitor.

Best single horse, 4 years or over, C. A. Weaver, Dip. and	3 00
2d best " " " Wm. Placeway,	2 00
3d best " " " I. P. Bingham,	1 00
Best single horse, 3 years old, Henry Baker,	2 00
Pair mules, J. Cranson,	Fav. noticed.
" D. Jackson,	" "

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SHEEP.

CLASS XI.

Merino Sheep.

Best buck, 2 years or over, Spanish, I. & J. F. Jennings, Dip. and	$4 00
2d best " " French, S. W. Twitchell,	3 00
3d best " " Spanish, James Rumsey,	2 00
4th best " " French, J. Cranson,	1 00
Best buck 1 year old, Fr. and Sp., J. W. Botsford,	2 00
2d best " " " " " "	1 25
3d best " " " " E. F. Burt,	75
Best 3 ewes, Sp., I. & J. F. Jennings,	3 00
2d best " Fr. and Sp., E. Buckel,	2 00
3d best " " " E. F. Burt,	1 00
Best 3 ewe lambs, Fr. & Sp., E. F. Burt,	2 00
2d best " Sp., I. & J. F. Jennings,	1 25

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CLASS XII.

Grade Sheep.

Best buck, 2 years or over, S. W. Twitchell,	$2 00
2d best " " " " "	1 25
Best yearling buck, W. B. Curtiss,	1 50
2d best " S. W. Twitchell,	1 00
3d best " E. J. Hardy,	1 00
Best buck lamb, " "	1 00
Best 5 buck lambs, F. Monroe,	1 50
" 5 ewes, E. J. Hardy,	1 50
" 5 ewe lambs, E. J. Hardy,	1 50

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CLASS XIII.

Southdowns and Long Wooled Sheep.

Best Southdown buck, 1 year old, H. H. Norton,	$1 50
2d best " " " " " "	1 00

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Best Southdown buck lamb, H. H. Norton, ... $1 00
2d best " " " " " 75
Best 5 Southdown ewes, " " 1 50
2d best " " " " 1 00
Best 5 Southdown ewe lambs, H. H. Norton, ... 1 50

CLASS XIV.

Foreign Sheep.

No entries.

SWINE.

CLASS XV.

Best boar, 6 months old or over, E. Bachelor, Trans. of '53 and $2 00
Best boar, under 6 months, H. H. Norton, Trans. of '50 and.. 1 50
Best breeding sow, Wm. Steadman, Trans. of '50 and..... 1 50
2d best " F. Hardy, Trans. of '50 and..... 1 00
3d best " J. Van Blaricum, Trans. of '50 and..... 75
Best 3 pigs under 6 months, J. McMillen, ... 1 50
2d best " " " Wm. Steadman, ... 1 00

POULTRY.

CLASS XVI.

Lot Turkeys, Frank O. Burt, ... $0 75
" " Chas. Jewett, ... 63
Pair grey Shanghais, Wm. Steadman, ... 50
3 Chittigongs, Clay W. Taylor, ... 50
3 Cochin Chinas, Fred. A. Taylor, ... 25

FARM IMPLEMENTS.

CLASS XVII.

Best farm wagon, Wm. R. Melvin, Patent Office Report and.. $4 00
2d best " " " Trans. of '52 and..... 2 00

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Best corn cultivator, A. W. Smith & Co., Trans. of '52 and... $1 50
Best neck-yoke and whiffletrees, W. R. Melvin,..... 75
Best grub-hoe, W. R. Melvin,..... 75
Best staple and ring, " 75
Best horse-shoe, " 50
Best harrow, Geo. R. Hoyt,..... 1 00
Best horse-rake, A. W. Smith & Co.,..... 1 50
Best straw-cutter, L. B. Fonda,..... 1 50
Best grain-drill, D. Jackson, Trans. of '54 and..... 2 00
Best corn-basket, A Wilcox, ... 75
One-horse Buffalo wagon, B. F. Scofield, dis. P. O. Rep. and.. 1 00
Democrat buggy, E. L. Soules, dis. P. O. Rep. and..... 1 00
Cultivator, L. Judson,..... favorably noticed

MECHANIC ARTS — DOMESTIC MANUFACTURES.

CLASS XVIII.

Best open buggy, F. J. Lee, Pat. Office Rep. and..... $1 00
Best single harness, (very fine,) J. M. Gilbert, Trans. of '52 and 1 00
Best set window blinds, G. Phillips, Mechanics, &c., and..... 25
Best window-sash, J. G. Mason, Trans. of '51 and..... 50
Skeleton wagon, Wm. Huntington,..... favorably noticed.

There were several carriages and harnesses entered in this Class, which were worthy of notice, and some of them worthy of premiums; but being of foreign manufacture, no premium can be awarded under the rules of the Society.

THE DAIRY.

CLASS XIX.

Best 10 lbs. butter, made in June, Mrs. J. B. Lee, Receipt-book and..... $1 00
2d best 10 lbs. butter, made in June, Selden Pullen,..... 1 00
Best 10 lbs. butter made at any time, Mrs. Levi Clark, Receipt-book and..... 1 00
2d best 10 lbs. butter made at any time, Mrs. D. Case,..... 1 00
3d best " " " Mrs. Wm. Steadman, 50

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Best lot, quantity and quality considered, made in twenty consecutive days, from one cow, the amount being 31½ lbs., no competition, and the second premium is awarded, G. M. Wood, ... $2 00

Best new cheese, no competition, 2d premium awarded, A. Wakeman, ... 75

There were several entries of butter in this Class, which were deemed worthy of special notice, besides those to which premiums are awarded.

SUGAR, HONEY AND BREAD.

CLASS XX.

Best loaf salt-rising bread, Mrs. D. Case, ... $0 50
2d best " " Mrs. J. R. Mason, ... 25
Best loaf hop-yeast bread, Mrs. V. R. Durfee, ... 50
2d best " " Mrs. J. W. Botsford, ... 25
Best 10 lbs. honey, J. I. Van Keuren, ... 75
2d best " " Henry Stiles, ... 50
Best loaf brown bread, Mrs. H. Wing, ... 50
Best 10 lbs. maple sugar, very fine, Mrs. A. Randall, ... 75

There were several loaves of bread, besides those to which premiums are awarded, which were very good; some fine. The honey entered was all extra fine.

PLOWING AND PLOWS.

CLASS XXI.

Best plowing with oxen, Thos. Mussen, ... $2 00
2d best " " P. V. Botsford, ... 1 50
Best plow for sod ground, (Rathgate,) A. W. Smith & Co., Trans. of '54 and 1 00
Best plow for crossing, (Starbuck,) A. W. Smith & Co., Trans. of '55 and 1 00

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VEGETABLES.

CLASS XXII.

Best exhibition of roots for feeding stock, F. Munroe, Trans. of '52 and	$2 00
Best ½ bushel early potatoes, F. Munroe, Trans. of '52 and	50
2d best " " " A. Dibble, " "	25
Best ½ bushel potatoes for winter use, Wm. R. Melvin, Trans. of '52 and	50
2d best ½ bushel potatoes for winter use, J. R. Sage, Trans. of '52 and	25
Best ½ bushel ruta bagas, Henry Stiles,	50
2d best " " " J. Cranson,	25
Best ½ bushel white turnips, A. Dibble,	50
Best ½ bushel onions, Cyrus Holt,	50
2d best " " Geo. Lawrence,	25
Best load pumpkins, T. B. Brooks,	1 00
2d best " " Daniel Case,	50
Best 6 pumpkins, Wm. Steadman,	50
2d best " T. B. Brooks,	25
Best 6 cabbages, Conrad Wall,	50
2d best " D. Blackman,	25
Best 3 winter squashes, A. Barnard,	50
Best doz. blood beets, Israel Bennett,	50
2d best " " F. Munroe,	25
Best doz. carrots, A. Garlock,	50
2d best " " Fred A. Taylor,	25
Best 3 watermelons, J. Paddock,	50
4 bushel of potatoes, (Cala blue,) A. Hollis,	Pat. Office Rep.
Lot red peppers, Wm. Sharpe,	Fav. noticed.
Lot cabbage turnips, "	" "
One gourd, J. H. Galloway,	" "
Lot white turnips, L. B. Fonda,	" "
One mammoth squash, weight 121 lbs., W. A. Hall,	" "

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FRUIT AND NUTS.

CLASS XXIII.

Best exhibition of apples, grown by exhibitor, No. of varieties and quality considered (32 varieties), fall and winter fruit, F. Monroe, Pat. Office Rep. and $2 00
2d best exhibition of apples, grown by exhibitor, 25 varieties, E. Barnard, Fruit-Garden and 1 00
3d best exhibition of apples, grown by exhibitor, 66 varieties, J. Brown, Trans. of '55 and 1 00
Best 5 varieties winter apples, F. Monroe, Trans. of '55 and ... 1 00
2d best " " E. Barnard, ... Western Fruit-Book
Best 5 varieties fall apples, F. Monroe, Trans. of '52 and 1 00
2d best " " J. Brown, " '51 " 75
Best lot peaches, J. H. Galloway, " '51 " 1 00
2d best " Morris Bennett, " '51 " 50
Best lot pears, G. Wheeler, ... 75
2d best " F. J. Lee, ... 50
Best lot plums, J. Brown, ... 75
Best lot grapes, W. Green, ... 75
2d best " F. Monroe, ... 50
Best lot quinces, J. M. Murray, ... 75
2d best " Wm. Tooley, ... 50
Best ½ bushel dried apples, Mrs. S. M. Yerkes, ... 75
2d best " " Mrs. E. Bachelor, ... 50
Best lot black walnuts, F. Hickey, ... 25
Best lot butternutts, Moses Lyon, dis., ... 25
Lot preserved plums, David Davis, dis., ... 25
2 varieties apples, E. J. Hardy, ... Fav. noticed.
5 " " Wm. Tooley, ... " "

SAMPLES OF GRAIN AND SEEDS.

CLASS XXIV.

Best ½ bushel dent corn, F. Monroe, ... $0 50
2d best " " J. Cranson, ... 30
Best ½ bushel white flint corn, F. Monroe, ... 50
" " yellow " " " 50

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2d best ½ bushel yellow corn, Jas. R. S ge,	$0 30
Best ½ bushel winter wheat, D. Davis,	75
2d best " " J. W. Richmond,	50
Best ½ bushel spring wheat, " "	75
2d best " " J. Van Blaricum,	50
Best ½ bushel white beans, L. Clark,	50
2d best " " C. M. Wood,	30
Best ½ bushel buckwheat, Geo. Lawrence,	50
2d best " " F. Monroe,	30
Best ½ bushel timothy-seed, T. B. Brooks,	75
2d best " " S. M. Yerkes,	50
Best ½ bushel red-top seed, T. B. Brooks,	75
Best ½ bushel oats, S. M. Yerkes,	50
2d best " " J. W. Richmond,	30

DOMESTIC MANUFACTURES.

CLASS XXV.

First Department.

Best pair woolen blankets, Mrs. Wm. B. McMillen,	$1 00
2d best " " Mrs. E. B. Bunnell,	50
Best coverlet, Mrs. J. H. Wilcox,	1 00
2d best " L. E. Beach, jr.,	75
3d best " Wm. B. McMillen,	50
Best 10 yards rag-carpet, Mrs. H. P. Baker,	1 00
2d best " " Mrs. M. C. Case,	50
Best lb. white woolen-yarn, Mrs. H. P. Baker,	50
" mixed woolen-yarn, " "	50
" colored " Miss L. Beach,	50
Best dress-coat, Mrs. J. Pruden,	1 00
" 10 yards flannel, Mrs. T. B. Brooks, Receipt-book and	25
Woolen shawls, Mrs. J. R. Mason, dis.,	50
Best pair woolen gloves, " "	30
" pair woolen socks, Miss L. Beach,	25
" pair woolen fringe mittens, Mrs. E. Bachelor,	50
" " striped mittens, Mrs. C. Field,	25
" " stockings, Mrs. E. B. Bunnell,	30

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CLASS XXVI.

Second Department.

Best made dress, Miss S. Fonda, ... $1 00
2d best " Mrs. J. O. Fonda, ... 50
Best lady's hat, Mrs. J. K. Cornyn, ... 1 00
2d best " Mrs. J. Pruden, ... 50
Best fancy quilt, Mrs. C. Hardy, aged 67 years, ... 1 00
2d best " Mrs. Wm. Huntington, ... 75
3d best " Mrs. E. B. Bunnell, ... 50
Best pair linen pillow cases, Mrs. J. R. Axtel, ... 50
2d best " " Mrs. E. Frisbee, ... 25
Best pair cotton pillow-cases, Miss Emma Hickey, ... 50
2d best " " Mrs. A. W. Smith, ... 25
Best pair cotton stockings, Mrs. C. M. Wood, ... 50
2d best " " Mrs. Warren Green, ... 30
Table-cloth, Mrs. J. R. Axtel, dis., ... 25
Pair cotton pillow-cases, made by a girl 4½ years old, Mrs. C. M. Wood's daughter, ... Fav. noticed.
Fancy quilt, by a girl 8 years old, Mary E. Hathaway, also " "

FANCY NEEDLE-WORK, ETC.

CLASS XXVII.

Spec. cut embroidery, Mrs. W. Huntington, ... $0 25
Lamp-mat, Mrs. G. H. Chambers, ... 25
Spec. raised needle-work, Miss H. A. Steadman, ... 75
" " " Mrs. G. H. Chambers, ... 50
1 mat, (uncut raised work,) Mrs. S. M. Yerkes, ... 25
Emb. cape, Miss Lois Barnard, ... 75
Ottoman cover, (flat work,) Mrs. A. W. Smith, ... 50
Spec. silk fringe, Mrs. A. W. Smith, ... 50
Worked collar, Mrs. J. Sowles, ... 50
Crotchet tidy, Miss F. E. Fonda, ... 25
" collar, Miss R. A. Blackman, ... 25
Emb. silk, Mrs. A. A. Pond, ... 75
" " Mrs. M. L. Gay, ... 50

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Worst. scrap-book, Mrs. A. W. Smith,	$0 50
Pair ottomans, (raised work,) Mrs. E. B. Bunnell,	50
Lamp-mat, Miss Millie Hickey,	25
Zephyr card-basket, Mrs. A. W. Smith,	25
Velvet emb. cloth cape, Miss S. Pond,	25
Crotchet napkin, Mrs. A. W. Smith,	Fav. noticed.
Pair of stools, Miss Ann M. Sullivan,	" "
Crotchet chair-tidy, Mrs. A. W. Smith,	" "
Lamp-mat, Miss S. L. Axtell,	" "
Crotchet collar, Miss S. Pond,	" "
Knit table-spread, Mrs. A. W. Smith,	" "
Rug, Miss Sarah Scofield,	" "
Stand-spread, Mrs. G. Taylor,	" "
Worked-collar, Miss F. Reed,	" "
Child's cloak, Mrs. A. W. Smith,	25
Hair book, " "	50
Close knit spread, Mrs. Wm. Huntington,	50
Crotchet bed-spread, Miss F. E. Fonda,	50
Cheneille rug, Mrs. E. B. Bunnell,	50

ORNAMENTED WAX-WORK, ETC.

CLASS XXVIII.

Basket wax-fruit, Miss S. E. Rumsey,	$0 75
Wreath wax-flowers, Mrs. J. Pruden,	50
Vase paper-flowers, Mrs. A. W. Smith,	50
Coral basket, Mrs. Geo. Taylor,	50
Artificial snow-ball, Miss E. Beach,	50
Best hair wreath, Miss S. E. Nobles,	1 00
2d best " Mrs. J. K. Cornyn,	75
3d best " Miss C. M. Placeway,	50
Best frame pellis-work, Miss Sarah E. Rumsey,	1 00
2d best " " Mrs. Wm. Huntington,	75
3d best " " Mrs. L. C. Crittenden,	50

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PAINTINGS, DRAWINGS, ETC.

CLASS XXIX.

Specimen painting, Miss S. F. Galloway, ... $0 50
Landscape pencilling, Miss Frankie Whipple, ... 1 00
Oil painting, Mrs. W. A. Clark, ... 50
Monochromatic pencilling, Mrs. Wm. Huntington, ... 50
" " Miss R. A. Blackman, ... 25
Crystal painting, Mrs. L. C. Crittenden, ... 75
" " Mrs. Rev. Geo. Taylor, ... 50
" " Miss S. L. Axtelle, ... 50
" " Mrs. L. C. Crittenden, ... 37½
" " Miss S. L. Axtelle, ... 25
" " " " " 25
Pencilling, Mrs. W. A. Clark, ... 75
" " " " 50
" " " " ..... Fav. noticed.
Pen-drawing, T. M. Joslyn, ... 1 00
Vase of flowers, Miss Rosa Lee, ... 25
House-plant, "Golden Eternal," Mrs. C. M. Wood, ... 25
Specimen pencilling, W. K. Sexton, worthy of 1st premium; favorably noticed and awarded a diploma, the same specimen having been awarded the 1st premium at the two last Fairs.

MISCELLANEOUS ARTICLES.

CLASS XXX.

Wheel-barrow, J. G. Mason, ... $0 50
Pleasure-sleigh, "fine," W. R. Melvin, ... 2 00
Buggy-box and gearing, " " Pat. Office Rep. and ... 1 00
Buggy-gearing and wheels, B. F. Scofield, Pat. Office Rep. and 1 00
Cutter, "extra," W. R. Melvin, ... 2 00
" "fine," " " 1 00
" W. R. Melvin, ... 50
Set of bob-sleighs, W. R. Melvin, ... 1 00
12 specimens of sea-moss, W. Green, ... Pat. Office Rep.
Miniature bureau, H. S. Noble, ... 25
" bedstead, Miss S. E. Noble, ... 25

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Cast pinion, Calen Phillipps,	$0 25
Cooking-stove and furniture, Bennett & Monroe,	1 00
Parlor " " " " "	50
Milk-safe, J. G. Mason, P. O. Rep. and	50
Segment and pinion-pattern, G. Phillips, P. O. Rep. and	50
Dressed sheep and lamb, J. B. Potter,	50
Hand cider-mill, Wm. Sexton, P. O. Rep. and	50
Specimens of cake sweetened with Chinese sugar cane syrup, H. Wing,	Fav. noticed.
Specimen sugar-cane syrup, H. Wing,	" "
" " " L. B. Fonda,	" "
Bottle current wine, F. J. Lee,	" "
Model bee-hive, W. Green,	" "
Pairing-machine, J. W. Bashford,	" "
Corn-grinder, G. W. Lee,	" "

Premiums awarded can be had by calling upon the Treasurer of the Society, Mr. Wm. McPherson.

MACOMB COUNTY.

No report received from Macomb county.

MONROE COUNTY.

MONROE, December, 1857.

To J. P. C. EMMONS, *Secretary of the State Agricultural Society:*

The annexed reports were made by the awarding committees at the Annual Fair for 1857, of the Monroe County Agricultural Society. The reports on Crops and Farms were accompanied by interesting statements, under oath, in regard to the yield and the system of tillage adopted; and these statements I hope to send you when they are published here. The Premium Corn yielded two hundred bushels of ears to the acre.

Our Fairs continue to excite considerable interest, and have been the means of much usefulness to the county, particularly in improving stock. We now have some of the best Horses and Cattle in the State, and the desire and determination is for further improvement.

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The Annual Address was made by Rev. R. R. SALTER, of La Salle, and was received with much favor by the large number of persons in attendance. A copy was requested for publication, and if furnished in season for the Transactions, will be fowarded to you.

Respectfully,

E. G. MORTON,

Secretary Monroe Co. Agricultural Society.

LIST OF PREMIUMS AWARDED.

REPORT ON FARMS.

The committee on farms respectfully report that in the discharge of their duty, they examined the farms of James Nelson and Peter Loose.

Mr. Nelson's farm is under a good state of cultivation, the fields well and conveniently arranged, fences in good repair, and land tolerably well drained with open ditches, judging from the luxuriant growth of herbage and the crops yet standing. Mr. Nelson is not a parsimonious farmer, his land is kept in good tilth, by clovering, manuring and a judicious rotation of cropping. There were some things, however, which your committee would recommend as adding much to the convenience and good order of a well-regulated system of farming. 1st. A judicious system of under-draining. 2d. The use of farm gates, in the place of bars. 3d. A good substantial board-fence enclosing the barn-yard, and a plain neat fence around the door-yard and garden, and a little more attention to shrubbery and a variety of choice fruits.

The farm of Peter Loose, of Monroe, is also under a good state of cultivation, with a soil well adapted to all the variety of products cultivated in this climate; rich in vegetable and mineral deposits; one on which a season like the past, all vegetable substances make a most rank and luxurious growth, and great labor and attention is required to subdue and keep in subjection the great variety of useless and noxious weeds indiginous to the alluvions of Monroe county. Mr. Loose has succeeded in maintaining the ascendency in a good degree—and during the three years he has been in possession of the premises, has made some fine improvements in the way of ditching and removing stumps, and in putting the fields in order, and also in seeding the land with clo-

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ver. There yet remains to be made important improvements in the way of farm buildings, gates and sheds—also in the setting and cultivation of a variety of fruits, an item too much neglected by our farmers generally.

In justice to Mr. Loose, we would say, that he has not yet been in possession of his present home a sufficient length of time to do all that he desires to accomplish in the way of improvements, and would not have entered his farm but for the backwardness of many who should have shown their zeal and enterprise by coming forward, in competition, and at the request of many members of the Society. There is one thing peculiar to Mr. Loose's farm, to which your committee take exceptions, which is the location of the buildings; the barn is across the highway from the house. They were so located when he came in possession, and are noticed by your committee to caution others from falling into the error. The objections were set forth in a report made by some of your committees three years since, and are too numerous to be repeated at this time, while there is very little to be urged in favor of such a location.

Your committee noticed in passing over the premises of Mr. Loose, what is quite too prevalent among farmers, which is the locating of farm implements somewhere near where they may be wanted another season. All farming utensils when not in use should be collected and housed, or protected in some manner from the weather. We are aware that owing to the peculiarities of the season that much work has been necessarily performed in a hurry, and rather imperfectly; but with all allowance we cannot excuse the want of order that will be entailed upon farmer's sons, by permitting them to drop their tools where they finish their work.

We also noticed that quite too much material had accumulated in the vicinity of the dwellings and barns in the form of old wagons, sleighs, plows, loose lumber and rails—neatness and order require all this material to be disposed of, to the smith, the foundry or the woodpile.

The time for examining has been limited and of necessity very imperfect, not at all satisfactory to your committee; and we would urge upon our brother farmers to call hereafter on the committee selected to examine farms at an early day—even as early as June or July.

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We would also say to the farmers of Monroe County, you are entirely too modest or indifferent. We wish more duty as a committee, knowing, as we do, some of the splendid farms within our county, we have a desire to bring them to the notice of the community as examples of order, skill, and well directed application in agricultural science.

We award to James Nelson, of Frenchtown, the First premium, and to Peter Loose, of LaSalle, the Second premium on Farms.

Having examined the premises of Mr. Whelpley, of Monroe, we beg leave to refer our professional, mechanical and literary friends to the example set them of time well spent, as a recreation from other pursuits. Mr. Whelpley's garden is a pattern of neatness. He has nothing growing which should not be there, and almost everything growing which contributes to the comfort and sustenance of a family. His industry is commendable, and his example well worthy the attention of the community.

W. H. MONTGOMERY,
A. J. KEENEY,
JOHN MULHOLLAND,
Committee.

—

FIELD CROPS.

The Committee on Field Crops beg leave to report, that upon due examination of the various statements offered, they have awarded Premiums as follows:

To Peter Loose, of Monroe, 1st premium on wheat,	$4 00
To A. J. Keeney, of Erie, 2d " "	2 00
To A. E. Dunbar, of Monroe, 1st premium on corn,	4 00
To Chas. N. Marshall, of Monroe, 2d " "	2 00
To James Mulholland, of Erie, 1st premium on barley,	3 00
" " " " " oats,	3 00
To R. Nims, of Monroe, 1st premium on beans,	2 00

H. B. MARVIN,
WM. DUNBAR,
L. SACKETT,
Committee.

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PRODUCTS OF THE DAIRY.

The Committee on the Products of the Dairy, report, that there was offered for their inspection more butter from different makers, and of a much better character, than has ever before been offered at any of our County Fairs; indeed, all the butter offered was most excellent, and the greatest difficulty the Committee found with the butter this year, is of discriminating between the different specimens offered. Their only regret is that there are not premiums for all. The soil and climate of our county are eminently adapted to grazing and dairy purposes, and we rejoice that the time has arrived when this fact seems to be appreciated by our farmers, and when it is absorbing more of the attention of our farming community. There should be no inferior article of butter, and there will not be where the requisite knowledge is acquired. The number and varieties of cheese submitted to the Committee was not as great or as good. The quality is greatly improved, but is there any good reason why our cheese should not take the place of the best cheese made in our country.

There were only two specimens of honey offered, neither of them of very best quality.

The Committee had great difficulty in determining which was the best butter—it was all best; but as they must award the premium, they give the

1st premium to Mrs. A. J. Keeney, Erie.
2d " " Mrs. Chas. Choate.
3d " " Mrs. John Hanson.

Cheese.

1st premium to Mrs. D. T. Galloway.
2d " " Mrs. Lewis Welch.
3d " " Mrs. D. O. Spaulding.

Honey.

Best specimen, D. O. Spaulding.

CHAS. NOBLE,
JOHN BURCH,
MRS. J. P. ROWE,
MRS. A. HALL,
Committee.

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FINE ARTS AND FANCY ARTICLES.

The Committee report, that the exhibition in their department was creditable, although limited. Much native talent was discovered in those who have presented Paintings, and we are pleased in having an opportunity to speak to them a word of encouragement. The greatest masters of the art, once, could have shown no better pictures than theirs; but at last were able to produce works, which have been studies of all other artists, down to the present time. Such would we recommend to *our* artists, together with the study of nature—the great study of all great artists—instead of copying the peculiarities of any master or school of art. The practice of awarding prizes for paintings commenced 500 years before the Christian Era—we consider it a good one; and regret that on this occasion high prizes are not placed at our disposal. The productions from the gallery of Dr. L. S. Stevens, in the various styles of his art, show the disciplined hand of a refined artist. We congratulate the people of Monroe county on having one among us, who has so nearly reached perfection. His pictures can hardly be excelled in this country or in Europe.

The Committee were unanimous in the following decisions:

Best penciling,.....Miss E. Manning.
Best oil painting,..... " "
2d best " .....Miss E. Thurber.
Best Oriental painting,.....Miss Martha Garwood.
2d best " " .....Wm. Keeney.
Best embroidered undersleeves,.....Miss Susan Smith.
Best " skirt,.....Miss O. L. Davenport.
2d best " " .....Miss M. J. Blakesley.
Best ottoman cover,.....F. A. Winans.
Best toilet cushion,.....Mrs. O. Stoddard.
Best lamp-mat,.....Miss Caroline Caldwell.
2d best " .....Miss Jane Stone.
3d best " .....Mrs. D. O. Spalding.
Best feather card-basket,.....Mrs. M. A. Hall.
Best ring-bag,.....Mrs. Mary G. Keeney.
Best sofa-tidy,.....Miss Minne Boehme.
Best cake-tidy,.....Mrs. A. Morton.

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Best chair-tidy,.....Miss M. Garwood.
2d best " .....Mrs. H. Miller.
Best rug made of rags,.....Mary G. Thurber.

DR. I. D. INGERSOLL,
REV. MR. CARPENTER,
G. A. STRONG,
MISS HATHAWAY,
MISS ALDRICH,
Committee.

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AGRICULTURAL AND OTHER IMPLEMENTS.

Your Committee on Agricultural and other Implements, having performed the duty assigned them, report that they regret very much to find the limited amount of articles on exhibition that came under their notice. With but one exception, there was not as much as could be found at almost any farmer's barn in the county, while your Committee are confident that our county can, and does compete with almost any one county in the State.

We found a good representation in carriages and buggies, although no competition, which showed a decided improvement, in both taste and workmanship of our home manufacture.

Best buggy,.....John W. Little.
Best two horse wagon,.....John Heck.
Best plow,.....Thomas Clark.
Best scraper for furrows,.....Peter Loose.
Best corn-planter,.....Henry Webb.
Best corn-sheller,.....R. Nims
Best fanning-mill,.....John Little

R. M. BRIGHAM,
W. P. GALE,
SAMUEL P. CLARK,
Committee.

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MANUFACTURED ARTICLES.

The Committee have examined the articles assigned to us, and report the

Best calf-skin as No. 104, offered by ..... Wm. Waterberry.
" sole-leather, No. 143, by ..... A. Kerschner.
" harness-leather, No. 133, by ..... " "
" full-cloth, No. 84, by ..... Mrs. S. Sweeney.
" home-made flannel, No. 80, by ..... Mrs. Jas. Bently.
" wagon-spokes, No. 74, by ..... J. Van Wormer.
" barrel of flour, No. 26, by ..... F. Walldorf.

There were other articles worthy of notice, not found on our List for Premiums—among them, upper-leather, by A. Kerschner.

J. S. TUCKER,
B. W. LATHAM,
S. SWEENEY,
Committee.

—

HORSES.

The Committee report as follows:

Best Stallion.

1st premium to ..... Mr. Dealing.
2d " " ..... Mr. Langdon.

Best blooded Stallion.

1st premium to ..... J. M. Sterling.
2d " " ..... Mr. Sherman.

Best Mare and Colt.

1st premium to ..... C. Gibson.
2d " " ..... Levi Buck.

Best blooded Mare.

1st premium to ..... Mr. Sherman.
2d " " ..... Mr. Paulding.

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The Committee recommend that Mr. Blodgett have one-half of the premium for best breeding mare and colt, he having the best colt.

JAMES DARRAH,
R. F. BAILEY,
P. LOOSE,
Committee.

MATCHED AND SINGLE HORSES.

The Committee on matched, single horses and colts, would submit the following report:

Best span matched horses, Thos. G. Cole, 1st prize.
2d do Addison Aldrich.

The competition in this Class was spirited. Your committee in deciding upon the merits of the different horses, took symmetry of form, general action and speed, in consideration. The horses were "timed," No. 63 making their three-quarters of a mile, on rough field track, in 2 min. 7 sec.; No. 10 in 2 min. 17 sec.

Single Horses.

The competition in this Class was also very spirited, there being many horses entered, and nearly all of them very good ones. The committee award No. 88 first prize, Jas. Darrah; No. 26 second prize, C. T. Cady; No. 88 making his three-quarters of a mile in 2 min. and 6 sec.; No. 25 in 2 min. and 16 sec.

Saddle Horses.

No. 5 first prize, John Hanson. The committee recommend No. 86 for second prize, Jas. Darrah.

Working Horses.

On Working Horses the committee award first prize to W. R. Stimpson; second to W. P. Gale.

Matched Ponies.

First prize to Jas. Wendell.

Single Ponies.

Pony three years old, prize recommended, Andrew Guior. First prize to Jacob Loose.

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Three Year Old Colts.

First prize to N. Langdon; second prize to Hiram Smith.

Two Year Old Colts.

First prize to Joseph Sterling; second prize to Ed Hotchkis.

One Year Old Colts.

First prize to M. Paulding; second prize to Chas. N. Marshall.

The display of colts was very good, speaking well for the future of our county in this department of agriculture.

We think the show of horses was very creditable to the county, not only denoting marked improvement over past years, but showing much enterprise, successful breeding and skillful training.

HENRY J. LATSHAW,
S. B. WAKEFIELD,
J. A. WENDALL,
Committee.

—

WORK OXEN AND STEERS.

The committee award premiums as follows:

Best pair work oxen, A. Potter,	$3 00
2d best, R. D. Lawrence,	2 00
Best pair 4 year old steers, A. Potter,	3 00
2d best pair. A. Potter,	2 00
Best pair 3 year old steers, J. Mulholland,	3 00
2d best, A. Potter,	2 00
Best pair 2 year old steers, A. Potter,	2 00
2d best, A. Potter,	1 00
Best pair 1 year old steers, J. Mulholland	2 00
2d best, R. Hendershot,	1 00

A. J. NICHOLAS,
HARVEY STONE,
R. STIMPSON,
Committee.

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OTHER NEAT CATTLE.

The Committee on other neat cattle are happy to report that the exhibition this season is more creditable to the county than any in previous years, and it is evident that the interest in stock is increasing, and promises to be of much usefulness to the county, and to add to its agricultural wealth. This we are glad to see, believing that the stock and dairy business should be encouraged by all suitable means as peculiarly appropriate to this county. The Committee after bestowing as much care to the subject as their time would permit, award premiums as follows:

Best Durham bull, Jas. A. Wendall,	$4 00
2d best, H. Austin,	3 00
Best grade bull calf, W. R. Stimpson,	2 00
Best Durham heifer, H. Austin,	2 00
" cow, "	3 00
2d best, H. Austin,	2 00
Best Devon bull, W. H. Wells,	4 00
2d best, Ira R. Grosvenor,	3 00
Best Devon heifer, Ira R. Grosvenor,	2 00
2d best, Alfred Potter,	1 00
Best Devon cow, Ira R. Grosvenor,	3 00
2d best, Francis Marsac,	2 00
Best Devon bull calf, Ira R. Grosvenor,	2 00
2d best, C. T. Cady,	1 00
Best grade bull, Geo. Hurd,	4 00
2d best, John Mulholland,	3 00
Best grade heifer, Jas. A. Wendall,	2 00
2d best, R. Hendershot,	1 00
Best grade bull calf, John Mulholland,	2 00
Best grade heifer calf, G. H. Shearman,	2 00
Best native bull, D. Hillis,	2 00
Best native bull calf, Chas. Knapp,	1 00
Best native heifer calf, Chas. Knapp,	1 00
Best milch cow of any breed, W. R. Stimson,	3 00
2d best, W. E. Bigelow,	2 00
3d best, Wm. Dunbar,	1 00

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Best fatted ox, Jacob Rauch, ... $4 00
Best string of matched cattle, A. Potter, ... 10 00

H. B. MARVIN,
N. LANGDON,
M. FISHBURN,
A. POTTER,
Committee.

—

GRAINS, FRUITS AND VEGETABLES.

The Committee on grains, fruits and vegetables report, that they have performed the duties assigned them in this department, and would state that there was not as full a show of fruit as formerly; but the varieties shown were as good, if not superior, to any exhibited heretofore at our County Fairs. The small quantity brought for exhibition may be owing to the fact that they are considered by many as public plunder, and the owner (unless he is constantly on the watch) gets but a small share to take home. The show of grains and vegetables was very creditable; such ears of corn, such enormous squashes, and such beautiful yellow pumpkins, (that we almost wished thanksgiving day was nearer,) we think cannot be surpassed in the State.

We have awarded the following premiums:

Best bushel seed wheat, Chas. H. Boyce, ... $1 00
" spring wheat, M. Fishburn, ... 1 00
" ears corn, Chas. N. Marshall, ... 50
" barley, J. Nelson, ... 50
" buckwheat, R. D. Lawrence, ... 50
" beans, M. Fishburn, ... 50
" winter apples, Geo. Hurd, ... 1 00
2d best bushel winter apples, Charles N. Marshall, ... 75
Best bushel potatoes, James Miller, ... 50
2d best, D. E. Morris, ... 37
3d best, M. Fishburn, ... 25
Best bushel beets, C. N. Marshall, ... 37
Best 3 pumpkins, R. Nims, ... 50
Best 3 squashes, James Davenport, ... 50
Best six apples of five varieties, G. R. Hurd, ... 50

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2d best, J. Nelson,	$0 37
Best variety of vegetables, Mrs. Haskell,	1 00
Best basket quinces, A. McIntyre,	50
Best sample peaches, W. W. Gale,	50

As this sample of peaches was the only one on exhibition, and peaches not being on our list for premiums, we would recommend that a premium of fifty cents be given. They were very superior in size and quality, as your committee can testify. We also recommend as worthy of note, several large winter radishes, presented by M. Bittman, one of them weighing over 8 lbs., but we were unable to judge as to their quality and merits.

THOS. CLARK,
C. M. HUMPHREY,
OLIVER HALL,
Committee.

—

SHEEP.

The Committee report as follows:

Best fine wool buck, J. C. Reeves,	$3 00
2d best, Spafford Hall,	2 00
Best ewe, "	2 00
2d best, J. C. Reeves,	1 00
Best pen 5 lambs, J. C. Reeves,	3 00
2d best, S. Hall,	2 00
Best long wool buck, John Gregg,	2 00
2d best, J. Nelson,	1 00
Best pen five lambs, J. Gregg,	2 00
2d best, J. Nelson,	1 00

ROBERT P. ROWE,
ROBERT HENDERSHOT,
JACOB LOOSE,
Committee.

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SWINE.

Best boar, Wm. Dunbar,	$2 00
2d best, Geo. Hurd,	1 00
Best sow and pigs, R. Nims,	2 00
Best fatted hog, Wm. Dunbar,	1 50

The Committee recommend a premium to G. Dental, for a sow and two pigs, seven months old.

T. P. ALDRICH,
R. D. LAWRENCE,
E. ROWLEY,
Committee.

PLOWING.

The Committee report that the best plowing was done by Mr. Keeney, and the second best by Mr. Hurd. The plowing was miserable enough, and the land unfavorable; and the premiums are referred to the Executive Committee.

C. M. HUMPHREY,
JOHN HANSON,
WM. GALE,
Committee.

DISCRETIONARY COMMITTEE.

This Committee report that they have endeavored to notice as faithfully as possible all articles on exhibition not noticed by other committees of the Society. And first, we would call attention to the Syrup presented by James Davenport and R. D. Lawrence, made of the Chinese Sugar Cane, of this season's growth, and which afforded a very favorable indication that this crop may be successfully and profitably raised in the county. Both specimens were good. We are glad to learn that a mill is being made for grinding or crushing the cane with the view of a more complete trial of its merits.

Next, the Wine presented is worthy of flattering notice. Mrs. Haskell had on exhibition five different varieties—grape, raspberry, straw-

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berry and red and white currant—and Mr. Lawrence had grape wine. We look upon these wines as far better than the imported article, and would particularly recommend the grape wine as purer and safer than that of foreign manufacture. When such wine can be made at home, we see no reason why its manufacture may not be extended profitably and usefully to the public.

We hardly know how to speak in sufficient terms of praise of the extended and rich variety of preserves, fruits, jellies, syrups, tarts, &c., numbering over thirty bottles and cans, made perfectly air tight, and by a chemical preparation, made to last fresh for years, presented by Mrs. N. R. Haskell. This display added much to the exhibition, and was generally admired by the public. It is evident that Mrs. Haskell understands this branch of business in all its perfection, and it is not surprising that the productions of her garden and industry find a ready sale in the Eastern markets and throughout the valley of the Mississippi. The Committee had a very agreeable opportunity to test the merits of her preserved fruits, for Mrs. H. had furnished three pies—a cherry, gooseberry and currant—made of fruit put up by her last year, and we speak the sentiments of all who were fortunate enough to get a bite, when we say they were very superior, and as fresh and palatable as if made of this years' growth.

There was a display of domestic cloths and quilts. The white flannel, by Mrs. Jas. Bently, was a good article, as well as a coat made by her own hands—she having done the weaving, cutting and making. Of the quilts, the white one was preferred, but we have no number to direct us to the name of the owner.

There was two pieces of excellent rag-carpenting, presented by Mrs. Jas. Miller; also stockings and yarn by the same lady, and by Mrs. S. Sweeney, of fine wool and evenly spun.

We noticed for the first time at our Fair, two cakes of very neat tallow, an article of the best quality, presented by Mrs. H. Miller.

A double and single harness, well made at F. M. Winans' establishment; also, two pair of boots, by Julius Varian, of this city; a sewing-machine, by J. C. Cole; nicely finished axes, by William Kennell; and clothing, from the stores of Meyerfeld and Friedenburg, added to the general display.

A new spring-bed, by our townsman, Hon. J. Burch, was exhibited, which we cheerfully recommend, for ease, durability and cheapness.

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While viewing it, the Committee were tired enough to rest upon it, but were reminded that there were several bouquets in the Hall, of taste and merit. The pyramid, by Miss Hattie Haskell, we have never seen excelled, and those by Miss Fishburn were beautiful and inviting.

With these remarks, we leave the Executive Committee to finish our report, by adding to the articles named such premiums, if any, as the means of the Society will warrant.

MONTCALM COUNTY.

MR. J. P. C. EMMONS, ESQ.,
Secretary of Michigan State Agricultural Society:

DEAR SIR:—In compliance with the duties of my office, I forward you a statement of the proceedings of the Montcalm County Agricultural Society, for the year 1857.

The first Quarterly Meeting for the year, was held at the Rossman House, Greenville, March 14th.

At this meeting, a Committee was appointed by the President, to prepare a Premium List and Regulations to govern the Second Annual Fair of the Society.

It was also—

Resolved, To hold the Fair at the village of Greenville, on the 8th day of October.

At a meeting held June 13th, a Premium List and Regulations for the Fair, was presented by the Committee, which, on motion, was adopted.

The Second Annual Fair of the Society was held at Greenville, October 8th, 1857. It was a very pleasant day, and the exhibition of Stock, Vegetables, and other articles, was very large, and far surpassed the expectations of the most sanguine.

The fine Stock, and large display of other articles, made at the Fair, done credit to the exhibitors, and places us on a par with many older counties; indeed, it was said by persons present from other counties, where Societies had been longer established, and where the people were better able to procure fine, pure-blood Stock, that the exhibition of nice Stock far surpassed that of their own counties.

At 3 o'clock, P. M., Jacob Ferris, Esq., delivered a few appropriate

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remarks; after which, the following officers were elected for the ensuing year, viz:

President—R. C. Miller.

Vice President—Stephen Rossman.

Secretary—H. E. Light.

Treasurer—John Huff.

Trustees—John D. Fargo, Sheldon Ashley, A. W. Maynard, Henry Van Allen, H. B. Fargo.

Councilmen—Wm. M. Crane, Daniel Fargo, Wm. Phinnesy, Abram Mann, C. W. Olmsted, H. E Tucker, Thomas Spencer, Wm. Patrick, Perry Bailey, Volney Cawkins, Asa Ward, J. V. Noah.

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The Annual Meeting for the year was held at the Rossman House, Greenville, December 12th, 1857.

John Huff, Treasurer, and H. E. Light, Secretary, presented their bonds for the ensuing year, which were duly approved.

Henry Berage, Treasurer for the past year, also presented his report, which is as follows, viz:

Montcalm County Agricultural Society, in acc't with Henry Berage.

1856.		*Dr.*	
Nov. 4.	Cash received on deposit,		$45 05
Dec. 19.	" " "		79 94
			$124 99

1856.		*Cr.*	
Dec. 19.	Paid on orders drawn by the Secretary,		$124 99

H. E. Light, Secretary, presented his report, the financial of which is as follows:

Cash received for memberships,		$63 00
" "	from spectators,	14 07
" "	interest of money on deposit,	2 87
		$79 94

Cash paid over to Treasurer,	$79 94

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There are orders drawn to the amount of $2 50, not yet paid.

On examining the vouchers, the reports were adopted by a vote of the Board, and ordered placed on file.

Truly yours,

H. C. LIGHT,
Secretary.

LIST OF PREMIUMS

Awarded by the Montcalm County Agricultural Society, at its Second Annual Fair, held October 8th, 1857.

HORSES.

CLASS I.

Best blooded stallion, 4 years old or over, Alex. Satterlee,	$3 00
2d best, J. W. Clarke,	2 00
Best colt, 3 years old, or over, John Huff,	2 00
Best colt, 2 years old or over, John Huff,	2 00
2d best, J. W. Clarke,	1 00
Best colt, 1 year old or over, Christian Faulk,	2 00
Best mare and colt, John D. Fargo,	3 00
2d best, Ezra Satterlee,	2 00
Best span of matched horses, Henry Van Allen,	2 00
2d best, Ross A. Huffman,	1 00
Best roadsters, Abram Satterlee,	2 00
2d best, Elijah T. Miller,	1 00
Best draught horses, J. & G. Ashley,	2 00
2d best, Nelson Robinson,	1 00
Best single horse, Jerome Fargo,	2 00
2d best, Wm. M. Crane,	1 00

JOHN HUFF,
JOHN D. FARGO,
ABRAM MANN,
Judges.

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CATTLE.

CLARS II—DIVISION I.

Devons.

Best Devon bull, 3 years old or over, J. & G. Ashley,	$2 00
Best Devon bull, 2 years old, Henry Van Allen,	2 00
Best 1 year old bull, J. &. G. Ashley,	1 00
Best cow, 3 years old or over, Stephen Rossman,	2 00
Best cow and calf, J. & G. Ashley,	1 00
Best yearling heifer, "	1 00

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DIVISION II.

Durhams.

Best Durham bull, 3 years old or over, R. K. Divine,	$2 00
2d best, Jerome Fargo,	1 00
Best Durham bull, 2 years old, Josiah Bradish,	2 00
Best yearling bull, Henry Berridge,	1 00
Best Durham cow, 3 years old or over, John D. Fargo,	2 00
Best Durham heifer, 2 years old or over, Jerome Fargo,	2 00

—

DIVISION III.

Natives.

Best Native cow, 3 years old or over, A. W. Maynard,	$1 00
Best heifer, 2 years old, M. Rutan,	1 00
Best yearling, J. &. G. Ashley,	50
Best yoke of working cattle, John Churchill,	2 00
2d best, Leonard Dennis,	1 00
Best five yoke of oxen from one town, John Huff, Eureka,	2 00

—

Recommended as worthy of notice.

One yoke of matched oxen, 5 years old, A. G. Stockholm.
" " steers, 4 years old, Levi Macomber.
" " steers, 3 years old, J. C. Holding.

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One span of brindle steers, 1 year old, J. W. Clarke.
" white " 1 year old, R. C. Miller.

J. W. KENT,
O. T. NELSON,
JOHN CHURCHILL,
Judges.

SHEEP.

CLASS III.

Best Spanish Merino buck, S. Ashley,	$2 00
2d best, "	1 00
Best French Merino buck, R. C. Miller,	2 00
2d best, "	1 00
Best 5 ewes, S. Ashley,	2 00

HARVEY ALLEN,
Chairman.

SWINE.

CLASS IV.

Best boar, A. J. & H. E. Russell,	$2 00
2d best, Stephen Rossman,	1 00
Best sow and 5 pigs, Stephen Rossman,	2 00

S. ROSSMAN,
TYLER M. BURLEY,
WESTBROOK DIVINE,
Judges.

POULTRY.

CLASS V.

Best coop red Shanghais, J. D. Fargo,	$1 00
" " white " Jerome Fargo,	1 00
" " Brahma Pootras, Frank Olmsted,	1 00
" " black Spanish, Frank Olmsted,	1 00

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Best coop cross of different breeds, R. K. Divine,..... $1 00
" " of turkeys, R. K. Divine,..... 1 00

FRANK OLMSTED,
LESTER R. MILLER,
GEORGE CARPENTER,
Judges.

FRUITS.

CLASS VI.

Best and greatest variety of apples, Ezra Satterlee,..... $1 00
2d best " " J. B. Barr,..... 50
Best variety of pears, J. B. Barr,..... 50
" " peaches, J. C. Holding,..... 50
" " grapes, W. M. Crane,..... 50

H. B. FARGO,
A. G. STOCKHOLM,
P. R. GRIFFITH,
Judges.

VEGETABLES.

CLASS VII.

Best bushel of turnips, W. Divine,..... $0 50
" ½ bushel beans, H. E. Light,..... 50
" " beets, Rev. C. Spooner,..... 50
" " onions, S. Rossman,..... 50
" bushel ruta bagas, Rev. C. Spooner,..... 50
" 6 heads cabbage, " " 50
" ½ acre potatoes, yield 200 bushels ℔ acre, Henry Berridge, 1 00
" 5 acres wheat, yield 30 bushels ℔ acre, M. Rutan,..... 1 00

Recommended as worthy of notice.

One sample red glaze corn, by J. W. Clarke.
One " " " J. Bradish.

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One sample western red potatoes, by W. Divine.
One " pink-eye " J. Bradish.
One " acorn squashes, Wm. Hubbs.
One " " " H. Van Allen.
One " Kohl Rabbi, S. Rossman.
One " " " J. Bradish.
One " carrots, Rev. C. Spooner.
One sample carrots, J. J. Shearer.
One " parsnips, Rev. C. Spooner.
One " yellow-bush scollop squash, H. E. Light.
One " white " " " "
One " black Spanish radishes, " "
One " mammoth sunflowers, " "
One " Brazil turnips, Nathaniel Coons.
Several stalks Chinese sugar-cane, J. J. Shearer.

HARVEY ALLEN,
D. O. BLAKE,
JOHN MANN,
Judges.

DIARY.

CLASS VIII.

Best 15 lbs. cheese, Mrs. R. C. Miller,	$0 50
" 5 lbs. butter, Abram Satterlee,	50
" loaf bread, Mrs. Abram Satterlee,	50

Recommended as worthy of notice.

One sample of sorgho syrup, S. H. Warren.
" " cake made with sorgho syrup, Miss Mary E. Van Kleck.

J. M. FULLER,
HENRY BERRIDGE,
JAMES KENT,
Judges.

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HOUSEHOLD.

CLASS IX.

Articles manufactured in the County.

Best piece of white flannel, Mrs. J. B. Chamberlin,..... $1 00
" patch-work quilt, Mrs. D. O. Blake,..... 1 00
2d best " " Mrs. Deborah Miller,..... 50
Best pair pillow-cases, Mrs. J. B. Chamberlin,..... 25
" piece worsted-work, Mrs. William Maxted, jr.,..... 25
" " cotton embroidery, Miss Adaline Fargo,..... 25
" " silk embroidery, Mrs. J. B. Chamberlin,..... 25
" " crotchet-work, Mrs. A. W. Maynard,..... 25
" bunch artificial flowers, Mrs. C. C. Ellsworth,..... 25

MRS. M. RUTAN,
GEO. VAN NESS,
Judges.

CLASS X.

Articles of Foreign manufacture.

Best piece rag-carpet, Mrs. J. C. Mann,..... $1 00
" patch-work quilt, Mrs. Thomas Keeler,..... 1 00

MRS. C. C. ELLSWORTH,
MRS. J. B. CHAMBERLIN,
MISS ADALINE FARGO,
Judges.

MECHANICAL.

CLASS XI.

Articles manufactured in the County.

Best plow for all use, Maxted & Moors,..... $1 00
" lumber wagon, H. B. Fargo,..... 1 00

ISAAC H. VOORHEIS,
JEROME WOODRUFF,
JAMES B. CHAMBERLIN,
Judges.

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CLASS XII.

Articles of Foreign manufacture.

Best lumber wagon, R. K. Divine,	$1 00
" set double-harness, C. Stoughton,	1 00
" covered buggy, Jas. McCreedy,	1 00

R. N. SHERWOOD,
M. RUTAN,
A. H. MONROE,
Judges.

CLASS XIII.

Discretionary.

Best plainer, Danforths & Barrett,	$1 00
" clevis, Maxted & Moors,	25
" lot sash, Danforths & Barrett,	25
" 4-panel door, Danforths & Barrett,	25

H. S. GIBBS,
J. B. BARR,
Judges.

CLASS XIV.

Discretionary.

No report made by the Committee.

PLOWING MATCH.

CLASS XV.

Division 1—Horses.

1st premium, J. C. Mann,	$2 00
2d " Abram Satterlee,	1 00

Division 2—Oxen.

1st premium, Charles Kent,	$2 00

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NEWAYGO COUNTY.

No Society organized in Newaygo County.

OAKLAND COUNTY.

DEAR SIR:—Enclosed I send you my Annual Report of the Transactions of the Oakland County Agricultural Society, for the year 1857.

Yours very respectfully,

J. R. BOWMAN,
Recording Secretary.

OAKLAND COUNTY AGRICULTURAL SOCIETY.

The Ninth Annual Meeting of the Oakland County Agricultural Society, for the election of Officers, was held pursuant to notice, at the Fair Ground, in the village of Pontiac, on Friday, the 17th day of October, A. D. 1856.

The President of the Society, James Bayley, Esq., in the Chair called the meeting to order.

Thereupon, it was, on motion,

Resolved, That we now proceed to elect Officers for the Society, *viva voce*.

The following persons were then elected Officers of the Society for the ensuing year, viz:

For President—John Thomas, of Oxford.

For Vice Presidents—

1st District, Eli H. Bristol, Troy;
2d " Stephen Reeves, Pontiac;
3d " Horatio Wright, Groveland;
4th " A. S. Brooks, Novi;
5th " R. E. Trowbridge, Bloomfield.

Recording Secretary—Joseph R. Bowman, Pontiac.

Corresponding Secretary—Zeph. B. Knight.

Treasurer—Samuel E. Beach, Pontiac.

Executive Committee—Joseph D. Yerkes, Northville; John M. Nor-

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ton, Troy; C. A. Carpenter, Orion; Charles Baldwin, Rochester; C. W. Green, Farmington; A. C. Baldwin, Pontiac; Z. M. Mowrey, Milford; Moses Wisner, Pontiac; John W. Howe, Clarkston; Rufus Hunter, Birmingham.

The meeting then adjourned *sine die.*

JAMES BAYLEY,
President.

JOSEPH R. BOWMAN,
Recording Secretary.

MEETING OF THE AGRICULTURAL SOCIETY.

At a meeting of the Executive Committee of the Oakland County Agricultural Society, held at the office of the Recording Secretary, in Pontiac, on the tenth day of February, A. D. 1857, present,

John Thomas, President;

A. S. Brooks, Stephen Reeves, Vice Presidents;

Joseph R. Bowman, Recording Secretary;

Executive Committee—Chauncey W. Green, John M. Norton, John W. Howe, Rufus Hunter, Moses Wisner, Augustus C. Baldwin, Charles A. Carpenter, Joseph D. Yerkes, Charles Baldwin, Zebina M. Mowry.

On motion of Moses Wisner,

Resolved, That a Committee of three be appointed to ascertain what the strip of land, north of the Fair Ground, supposed to contain about three acres, and now owned by John Chamberlin, can be purchased for.

Messrs. Moses Wisner, Augustus C. Baldwin, and Chauncey W. Green, were appointed said Committee.

On motion of Moses Wisner,

Resolved, That the above Committee be and they are hereby empowered to purchase the above strip of land of John Chamberlin, provided the whole of said Committee agree upon the purchase.

Resolved, That in case the Committee cannot make the purchase of said land, that they be and are hereby instructed to procure the opening of the alley north of the Fair Ground.

On motion of Chauncey W. Green,

Resolved, That a subscription be circulated to raise the funds to pay for the above piece of land, if the purchase be made by the Committee.

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Messrs. Henry W. Lord, A. C. Baldwin, and Z. M. Mowry, were appointed to circulate subscription papers.

On motion of Moses Wisner,

Resolved, That a Committee of three be appointed to revise the Premium List and Rules and Regulations of last year, and report this evening.

Messrs. Wisner, Green and Yerkes were appointed said Committee.

On motion of Augustus C. Baldwin,

Resolved, That the Committee of Arrangements to be appointed be instructed to procure some suitable person or persons to deliver lectures on Scientific or Agricultural subjects, during the evenings of the next Fair.

The Committee on Premium List, Rules and Regulations, made a report in writing, which was accepted, and after some amendments, adopted.

Resolved, That one thousand copies of the Premium List, together with the Rules and Regulations, be printed for the use of the Society, under the direction of the Secretary.

On motion,

Resolved, That the Ninth Annual Fair of this Society be held on Wednesday, Thursday, and Friday, the 14th, 15th and 16th days of October next ensuing.

On motion,

Resolved, That the Hon. Kinsley S. Bingham be invited to deliver the Annual Address before said Society.

The Committee then adjourned until to-morrow morning, at eight o'clock.

—

February 11, 1857.

The Committee met at 8 o'clock, pursuant to adjournment.

On motion of C. W. Green,

Resolved, That a premium, to be contributed by the Executive Committee, of ten dollars for the best, and five dollars for the second best Essay on Domestic Economy, written by a female of Oakland County, be awarded by them at the next Annual Meeting. The Essay to be furnished at or before the next Annual Fair, and together with the author's name in a sealed envelop, to be delivered to the Secretary.

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On motion of C. W. Green,

Resolved, That a premium of ten dollars be offered for the best three span of mares or geldings from one town.

Resolved, That a premium of five dollars be offered for the best trained saddle-horse, to be trained in Oakland County.

On motion of C. W. Green,

Resolved, That the following premiums on Female Equestrianism be offered:

Best specimen of	Female	Equestrianism,		$7 00
2d best	"	"	"	5 00
3d best	"	"	"	3 00

Committee on Female Equestrianism—Henry W. Lord, Pontiac; Moses Wisner, do.; M. E. Crofoot, do.; Henry K. Foote, Milford; C. W. Green, Farmington.

On motion,

Resolved, That all persons owning farms in Oakland County, and living on adjoining lands, over the county line, shall have the privilege of competing for premiums the same as though they resided in this County.

The Committee then proceeded to the appointment of the Viewing Committees.

[For Premium List and Viewing Committees, see printed list.]

On motion of Z. M. Mowrey,

Resolved, That a Committee of five be appointed to take charge of the Fair Ground, and make all the necessary arrangements for the next Annual Fair.

Messrs. Moses Wisner, A. C. Baldwin, Charles Baldwin, John Thomas and J. R. Bowman, were appointed said Committee.

On motion of C. W. Green,

Resolved, That the Committee of Arrangements be instructed to invite the citizens of Pontiac to subscribe the sum of three hundred dollars, by the first day of June next, towards defraying the incidental expenses of the next Annual Fair, and in case said sum be not subscribed by that time, that the Committee, in their discretion, call a

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meeting of the Executive Committee, to take into consideration the propriety of removing the Fair to some other place in said County.

Adjourned.

JOHN THOMAS,
President.

JOSEPH R. BOWMAN,
Recording Secretary.

At a meeting of the Executive Committee of the Oakland County Agricultural Society, held at the office of Moses Wisner, on the evening of the 14th day of October, A. D. 1857, present,

John Thomas, President;

Joseph R. Bowman, Recording Secretary;

Moses Wisner, Augustus C. Baldwin, Chauncey W. Green, J. D. Yerkes, Charles Baldwin, John W. Howe, Executive Committee.

It was

Resolved, That the following Committees be appointed to superintend the several departments during the Fair, viz:

Horse Department,.....C. W. Green.
Cattle " .....John M. Norton.
Sheep and Swine Department,.....J. W. Howe.
Farm Implements, Carriages and Machinery,.....Charles Baldwin.
Vegetables and Poultry, ...Z. M. Mowry.
Fruit, Flowers and Fine Arts,.....Moses Wisner and A. C. Baldwin.
Domestic Manufactures,.....Rufus Hunter.
Butter, Cheese, Maple Sugar, Grain, &c.,.....C. A. Carpenter.
Miscellaneous,.....J. D. Yerkes.

Adjourned, to meet at the Secretary's Office, on the Fair Ground, to-morrow morning at 11 o'clock, to fill vacancies in Viewing Committees.

J. R. BOWMAN,
Recording Secretary.

October 15, 1857.

The Executive Committee met pursuant to adjournment, and filled the vacancies in the Viewing Committees.

The Committees are as follows:

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Division A, Class 1, Short Horns—Walter Whitfield, George Rogers, Wm. Fisher.

Class 2, Devons—Lyman Fuller, John L. Brownell and Elbridge G. Deming.

Class 3, Herefords—Same as Class 2.

Class 4, Ayrshires—Same as Class 2.

Class 5, Cross of Blood Cattle—Gideon Scott, W. L. Coonley and Hezekiah Short.

Class 6, Grade and Native—R. E. Trowbridge, Wm. Gamble and John T. Van Tyne.

Class 7, Working Oxen, &c.—Cornelius Harris, Eber Durham and Brayton Flint.

Division B, Class 1, Blood Horses—Leveret C. Harger, Calvin A Green and Wilder Winslow.

Class 2, Horses for all work—N. G. Pinney, Alanson Pearsall and John R. Martin.

Class 3, Draught Horses—Thomas F. Gerls, Justin H. Butler and Henry Birge.

Class 4, Farm Teams—H. V. D. Bogert, Horatio Wright and Marshal S. Hadley.

Class 5, Carriage and Single Horses—Austin N. Kimmis, Jesse Aldrich and Serley Harger.

Division C, Class 1, Spanish Merino Sheep—Cyrus Wells, William Holcomb and Andrew C. Walker.

Class 2, French Merino—Hiram Barritt, Seth Leonard and Asher Parker.

Class 3, Cross of Blood—Eber Durham, John Derrick and Myron G. Cobb.

Class 4, 5, 6 and 7—John H. Button, Porter Beach and Dexter White.

Class 8, Swine—Hezekiah Short, J. J. Voorheis and Charles Baldwin.

Class 9, Poultry—A. W. Hovey, Cornelius Lawrence and Eli H. Bristol.

Division D, Class 1, Farm Implements—Benj. Page, Theron W. Barber and Nelson W. Clark.

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Class 2, Cabinet-work—C. Parsons, Geo. Pearsall and S. Dart.

Class 3, Boots, Shoes, &c.—S. Dart and Charles Parsons.

Class 4, Domestic Manufactures—Joseph A. Peck, Mrs. Phebe L. Gregory, Mrs. Hezekiah Short and Mrs. Wm. Taft.

Division E, Class 1, Painting and Daguerreotypes—John P. LeRoy, Mrs. W. M. McConnell and Mrs. Moses Wisner.

Class 2, Needle-work—Charles Draper, Mrs. A. C. Baldwin, Mrs. R. W. Davis and Mrs. Smith.

Class 3, Shell-work, &c.—A. B. Cudworth and Mrs. Chas. Baldwin.

Class 4, Flowers—G. W. Waldron, Mrs. Doct. Wilson, Mrs. C. A. Green and Miss Lucy Beach.

Division F, Class 1, Butter, Cheese, Maple Sugar, &c.—J. Van Volkenburgh, Mrs. Peter Hogan, Mrs. O. R. Adams and Mrs. Gideon Scott.

Class 2, Fruit—Randolph Manning, A. W. Hovey and Joel P. Tours.

Class 3, Vegetables—B. B. Redfield, A. W. Leggett and D. A. Wright.

Division G, Class 1, Grain, Flour and Seeds—J. C. Wendell, Caleb Everts and Harrison Smith.

Division H, Class 1, Female Equestrianism—H. W. Lord, Moses Wisner, M. E. Crofoot, Henry K. Foote and C. W. Green.

Class 2, Miscellaneous—Josephus Smith, John G. Crombie and David I. Prall.

The several Committees having received their books from the Secretary, proceeded to the examination of Stock and the various articles on exhibition.

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At 12 o'clock, M., of the 16th, the Annual Address was delivered by the Hon. K. S. Bingham.

After the delivery of which, it was, on motion,

Resolved, That the thanks of the Society be and they are hereby tendered to the Hon. K. S. Bingham, for his able and interesting address, just delivered before this Society, and that a copy of it be requested for publication.

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At 2 o'clock, P. M., the reading of the reports of the Viewing Committees was commenced by the Secretary.

At the conclusion of which, the Society was called to order by the President for the election of Officers.

Whereupon it was, on motion of Nelson W. Clark,

Resolved, That the second Article of the Constitution of this Society be so amended that the same shall read as follows:

"Article 2. The Officers of this Society shall be a President, one Vice President for each Representative District in the County, a Treasurer, a Recording Secretary, a Corresponding Secretary, and an Executive Committee of ten members, to be chosen for that purpose, at the Annual Meeting of this Society, which shall hereafter be held on the second Tuesday of January in each year."

The above amendment to the Constitution was adopted by a vote of two-thirds of the members present.

The Society then adjourned.

The following is the List of Premiums awarded:

LIST OF PREMIUMS,

Awarded at the Ninth Annual Fair of the Oakland County Agricultural Society, held at Pontiac, on Wednesday, Thursday and Friday, October 14th, 15th and 16th, 1857.

DIVISION A.

CLASS I.

Short-Horns.

Best bull, 3 years old and over, William Whitfield,	$6 00
2d best " " " Abram Snyder,	4 00
Best bull, 2 years old, John Thomas,	4 00
2d best " " Ira C. Seeley,	3 00
3d best " " J. P. Wyckoff,	2 00
Best bull, 1 year old, A. S. Brooks,	3 00
2d best " " C. Dusenbury,	2 00
Best bull calf, Frederick Bradley,	2 00
2d best " John Thomas,	1 00

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Best cow, 5 years old and over, M. L. Brooks,	$5 00
2d best " " " John Thomas,	4 00
Best cow, 4 years old, Wm. Whitfield,	5 00
2d best " " M. L. Brooks,	4 00
3d best " " " "	2 00
Best cow, 3 years old, A. S. Brooks,	5 00
2d best " " Wm. Whitfield,	4 00
3d best " " E. J. Dusenbury,	2 00
Best heifer, 2 years old, A. S. Brooks,	4 00
2d best " " M. L. Brooks,	2 00
3d best " " A. S. Brooks,	1 00
Best heifer, 1 year old, M. L. Brooks,	3 00
2d best " " Daniel Whitfield,	2 00
3d best " " A. S. Brooks,	1 00
Best heifer calf, Wm. Whitfield,	2 00
2d best " A. S. Brooks,	1 00
3d best " " "	1 00

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CLASS II.

Devons.

Best bull, 3 years old, Ira G. Hodges,	$6 00
" 2 " John W. Howe,	4 00
Best heifer, 2 years old, Allen Lawrence,	4 00

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CLASS III.

Herefords.

None entered.

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CLASS IV.

Ayershires.

1 cow, 10 years old, not entered for competition, having taken the first premium at a previous fair, was awarded a Diploma, John Thomas.

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CLASS V.

Cross of Blood Cattle.

Best cow, 5 years old and over, C. W. Green,	$5 00
2d best " " " " "	4 00
3d best " " " W. M. McConnell,	3 00
Best cow, 4 years old, C. W. Green,	4 00
2d best " " Lorenzo Sprague,	4 00
Best heifer, 2 years old, C. W. Green,	4 00
2d best " " Wm. Whitfield,	2 00
Best heifer, 1 year old, Lorenzo Sprague,	3 00
2d best " " W. M. McConnell,	2 00
3d best " " John L. Brownell,	1 00
Best heifer calf, John Thomas,	2 00
2d best " " "	1 00
3d best " C. W. Green,	1 00

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CLASS VI.

Grade and Native.

Best bull, 3 years old or over, John German,	$5 00
2d best " " " Sheldon Waugh,	4 00
3d best " " " B. Dewey,	3 00
Best bull, 2 years old, Joel Loomis,	4 00
2d best " " George Miller,	3 00
3d best " " Henry W. Thomas,	2 00
Best bull, 1 year old, J. Howith,	3 00
Best bull calf, Wm. Whitfield,	2 00
2d best " J. W. Howe,	1 00
3d best " J. P. Terry,	1 00
Best cow, 5 years old or over, John H. Button,	5 00
2d best " " " Harry Davis,	4 00
3d best " " " Wm. Dingman,	2 00
Best cow, 4 years old, Harry Davis,	5 00
Best heifer, 2 years old, B. P. Wixom,	4 00
2d best " " J. W. Howe,	3 00
3d best " " J. W. Howe,	2 00

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Best heifer, 1 year old, E. J. Dusenbury,	$3 00
2d best " " John H. Button,	2 00
3dbest " " N. W. Clark,	1 00
Best heifer calf, L. Brownson,	2 00
2d best " N. W. Clark,	1 00

CLASS VII.

Working-Oxen, Steers and Fat Cattle.

Best yoke working-oxen, 5 years old or over, B. D. Coonley,	$6 00
2d best " " " " Stephen Reeves,	5 00
3d best " " " " H. H. Windiate,	4 00
Best yoke steers, 4 years old, B. P. Wixom,	4 00
2d best " " " John H. Button,	3 00
3d best " " " " "	2 00
Best yoke steers, 3 years old, A. B. Donelson,	3 00
2d best " " " B. P. Wixom,	2 00
3d best " " " Frederick Bradley,	1 00
Best yoke steers, 2 years old, Charles A. Carpenter,	3 00
2d best " " " W. L. Coonley,	2 00
3d best " " " J. H. Button,	1 00
Best yoke fat cattle, Wm. Whitfield,	5 00
2d best " " Jacob Loomison,	3 00
3d best " " Charles England,	2 00
Best fat cow, John H. Button,	3 00
2d best " John P. Wyckoff,	2 00
Best 3 yoke of oxen from one town, J. H. Button, Farmington,	10 00
2d best " " " B. P. Wixom, " "	5 00
Best pair traixed oxen, accompanied by trainer, Wm. Dingman,	5 00

DIVISION B.

CLASS I.

Blood Horses.

2d best stallion, 5 years or over, P. C. Simmons,	$6 00
3d best " " " Harris Newton,	5 00

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Best stallion, 4 years old, C. W. Green,	$5 00
" " 3 " B. L. Harris,	4 00
Best stallion, 2 years old, Lorenzo Sprague,	4 00
2d best " " Birdsey Dewey,	3 00
3d best " " L. P. Tower,	2 00
Best horse colt, 1 year old, Wm. Morris,	3 00
2d best " " " C. W. Green,	2 00
Best brood mare, 9 years old, F. E. Eldred,	6 00
3d best " 3 " C. Truax,	2 00
Best mare, 2 years old, B. Dewey,	3 00
2d best " " C. W. Green,	2 00
Best mare colt, C. W. Green,	2 00

1 brood mare, 17 years old, C. W. Green. This animal having drawn the first premium heretofore, cannot compete for premiums, under a rule of the Society.

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Foreign.

Best stallion, 4 years old, S. T. Turner,	$4 00
" mare, 3 years old, " "	4 00

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CLASS II.

Horses for All Work.

Best stallion, 5 years old or over, F. E. Eldred,	$7 00
2d best " " " Newton & Goodhue,	6 00
3d best " " " A. G. Dewey,	5 00
Best stallion, 4 years old, George Bloomburgh,	6 00
2d best " " " John Hopler,	5 00
3d best " " " Wm. Simpson,	4 00
Best stallion, 3 years old, Willard White,	5 00
2d best " " " Harry Davis,	4 00
3d best " " "	3 00
Best stallion, 2 years old,	
2d best " " "	
3d best " " " S. T. Bryan,	2 00

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Best stallion, 1 year old, A. N. Kimmis,	$3 00
2d best " " " " "	2 00
3d best " " "	1 00
Best horse colt, Melvin Drake,	2 00
2d best " Luther Green,	1 00
3d best " John Daniels,	1 00
Best brood mare, 7 years or over, Luther Green,	6 00
2d best " " " A. N. Kimmis,	5 00
Best mare, 2 years old, Austin N. Kimmis,	3 00
2d best " " Lewis G. Tanner,	2 00

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CLASS III.

Draft Horses.

Best stallion, over 5 years old, N. Voorheis,	$7 00
2d best " " " L. S. Roberts,	6 00
Best stallion, over 2 years old, John Devore,	4 00
3d best " " " Chas. Tilden,	3 00
Best horse colt, 1 year old, Wm. Whitfield,	2 00
" " under 1 year old, Lorenzo Sprague,	2 00
Best brood mare, 5 years old and over, " "	6 00
2d best " " " " " "	5 00
3d best " " " " Wm. L. Coonley,	4 00
Best mare colt, 2 years old, Wm. Whitfield,	3 00
" " under 1 year old, Lorenzo Sprague,	2 00

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CLASS IV.

Farm Teams.

Best farm team, 5 years old or over, Arthur Davis,	$6 00
2d best " " " David Windiate,	5 00
3d best " " " William Tollman,	4 00
Best farm team, 4 years old, Wm. Dingman,	5 00
" " 3 " John R. Martin,	4 00

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CLASS V.

Carriage and Single Horses.

Best pair carriage geldings, 5 years old and upwards,					Joseph H. Morris,	$6 00
2d best pair carriage geldings, 5 years old and upwards,					Allan A. Walton,	5 00
3d best pair carriage geldings, 5 years old and upwards,					H. E. Cady,	4 00
Best pair carriage geldings, 4 years old,						
2d best	"	"	"	"		
3d best	"	"	"	"		
Best	"	"	3	"	Leveret C. Harger,	4 00
2d best	"	"	"	"	Moses Ingersoll,	3 00
3d best	"	"	"	"		
Best pair carriage mares, 5 years old,					G. C. Collins,	6 00
2d best	"	"	"	"		
3d best	"	"	"	"	G. H. Satterlee,	4 00
Best	"	"	4	"		
2d best	"	"	"	"		
3d best	"	"	"	"		
Best	"	"	3	"		
2d best	"	"	"	"		
3d best	"	"	"	"		
Best	"	"	2	"	A. Ayres,	3 00
2d best	"	"	"	"		
3d best	"	"	"	"		
Best single horse, 5 years old,						4 00
2d best	"	"	"		A. Whitehead,	3 00
3d best	"	"	"			
Best	"	4	"		John G. Owen,	4 00
2d best	"	"	"		Luther Green,	3 00
3d best	"	"	"			2 00
Best	"	3	"			3 00
2d best	"	"	"		John Derrick,	2 00
3d best	"	"	"			1 00
Best	"	2	"		David Windiate,	3 00
2d best	"	"	"		Seeley Harger,	2 00

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3d best single horse, 2 years old, Seeley Harger,					$1 00
Best single mare, 5 years old, C. A. Green,					4 00
2d best	"	"	"		3 00
3d best	"	"	"		2 00
Best	"	4	"		4 00
2d best	"	"	"	Benj. P. Wixom,	3 00
3d best	"	"	"	J. Windiate,	2 00
Best	"	3	"	J. Durkee,	3 00
2d best	"	"	"		2 00
3d best	"	"	"		1 00
Best	"	2	"	Caleb Terry,	3 00
2d best	"	"	"		2 00
3d best	"	"	"		1 00

DIVISION C.

CLASS I.

Spanish Merinos.

Best buck, Wm. Beam,	$3 00
2d best " N. S. Schuyler,	2 00
3d best " " "	1 00
Best pen 5 ewes, N. S. Schuyler,	3 00
2d best " J. W. Leonard,	2 00
3d best " " "	1 00
Best 5 ewe lambs, J. W. Leonard,	2 00
Best 5 buck lambs, F. A. Williams,	2 00

CLASS II.

French Merinos.

Best buck, N. S. Schuyler,	$3 00
2d best " " "	2 00
Best pen ewes, N. S. Schuyler,	3 00

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CLASS III.

Cross of Blood.

Best buck, 2 years old, N. S. Schuyler,	$3 00
2d best buck, 1 year old, " "	2 00
3d best " " " Wm. S. Beach,	1 00
Best pen 5 ewes, N. S. Schuyler,	3 00
2d best " " Wm. S. Beach,	2 00
3d best " " E. L. Taylor,	1 00
Best pen buck lambs, " "	2 00
Best pen ewe lambs, " "	2 00

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CLASS IV.

Silesian.

Best buck, N. S. Schuyler,	$3 00
2d best " " "	2 00
Best pen 5 ewes, N. S. Schuyler,	3 00

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CLASS V.

Leicester.

Best buck, H. H. Windiate,	$3 00
2d best " Joseph Thorpe,	2 00

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CLASS VI.

Southdown.

Best buck, Wm. Whitfield,	$3 00
2d best " " "	2 00
3d best " " "	1 00
Best pen 5 ewes, Daniel Whitfield,	3 00
" 5 ewe lambs, Daniel Whitfield,	2 00
" 5 buck lambs, " "	1 00

5 Bakewell ewes, Henry Woodward, no premium offered, but the Committee would recommend them to the favorable notice of the Executive Committee.

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CLASS VIII.

Swine.

Best boar, Joel Loomis,	$2 00
Best breeding-sow, W. E. Pier,	2 00
2d best " J. P. Terry,	1 00
3d best " E. Hamilton,	1 00
Best litter pigs, J. P. Terry,	2 00
2d best " E. Hamilton,	1 00
3d best " W. E. Pier,	1 00

CLASS IX.

Poultry.

Best coop turkeys, C. Harris,	$1 00
" Shanghais, E. H. Cressy,	1 00
" brahmas, E. H. Cressy,	1 00
" Chittagongs, Chas. Crawford,	1 00
" bantams, E. H. Cressy,	1 00
Best and greatest variety ten coops, E. H. Cressy,	2 00

DIVISION D.

CLASS I.

Farm Implements.

Best pair bob sleighs, H. T. West,	$3 00
" ox yoke, H. T. West,	1 00
" parlor stove, R. B. Morris & Bro.,	2 00
" corn cultivator, G. J. Denison,	2 00
" iron beam plow, Jas. Andrews,	3 00
" single carriage harness, High & Norton,	2 00
" double " " "	4 00
" buggy, W. C. Palmer,	4 00
" family carriage, J. M. Cole,	5 00
" farm wagon, Samuel Aris,	5 00
" half dozen brooms, Oscar Rust,	1 00
" fanning-mill, Nash & Blair,	3 00

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Best two horse pleasure sleigh, Parsons & Caldwell, ... $3 00
" roller, Henry W. Lord, ... 3 00
" horse-shoe tile, John Daines, ... 2 00
" pipe tile, John Daines, ... 2 00
" road wagon, Parsons & Caldwell, ... Dis. Prem.
" open buggy, B. A. Rice, ... Dis. Prem.
Potato digger, Orrin Starr, ... First Prem.
Self-pressing cheese-press, Wm. N. Willey, ... First Prem.
Hand loom, Edwin Gidley, ... First Prem.
Gang plow and seed sower combined, foreign manufacture, T. A. Flower, ... Worthy of Notice.
Straw-cutter, Gordon's patent, foreign manufacture, D. O. & W. S. Penfield, ... Worthy of Notice.
Hickock's wine and cider mill, foreign manufacture, D. O. & W. S. Penfield, ... A first-rate article.
Allen's mower, foreign manufacture, Charles T. White, Agent, ... Worthy of Prem.

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CLASS III.

Boots and Shoes, &c.

1 pair sewed calf boots, A. &. W. Goodman, ... $1 00
1 pair pegged " " " 1 00
Best made coat, Charles Pittman, ... 2 00
2d best " " " 1 00
Best made vest, " " 1 00

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CLASS IV.

Domestic Manufactures.

Best pair woolen blankets, Mrs. Ira Murlin, ... $3 00
2d best " " J. A. Hersey, ... 2 00
Best 10 yards flannel plaid, J. A. Hersey, ... 3 00
" 5 yards fulled cloth, Mrs. Warren Dunning, ... 3 00
2d best " " Hiram Paddock, ... 2 00
Best 10 yards satinet, J. A. Hersey, ... Dis. Prem.
" 10 yards rag carpet, Mrs. Levi Burlingham, ... 3 00

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2d best 10 yards rag carpet, Miss A. M. Hadsell,..... $2 00
10 yards " Seth Leonard,.....Dis. Prem.
Best 10 yards linen cloth, Mrs. Wm. Fisher,..... 2 00
" pair coverlets, Mrs. G. Green,..... 3 00
2d best " Mrs. H. C. Daniels,..... 2 00
1 cotton spread, Mrs. H. W. Thomas,.....Dis. Prem.
1 hearth rug,..... 2 00
1 pound woolen yarn, Mrs. W. A. Dennison,..... 1 00
1 pair linen stockings, Mrs. L. L. Dunlap,..... 1 00
1 pair cotton stockings, Miss S. E. Hadsell,..... 1 00
1 pair woolen stockings,.....Mrs. James Bailey.
1 pair " .....Mrs. G. P. Thurstin.
1 bed quilt,.....Mrs. A. Wallace.
1 " .....Mrs. A. Webster.
1 " .....Mrs. J. H. Beach.
1 case buck-skin gloves, furs, mittens, &c., very fine, O. R. Adams,.....Dis. Prem.

DIVISION E.

CLASS I.

Painting, Drawing, &c.

The Committee on Paintings, &c., report that although there were several oil paintings on exhibition, there were none painted in this county, and as they believe none entered for premiums.

No water-colored paintings entered for premiums.

There were a number of Grecian and antique paintings on exhibition, but as there were no premiums offered for such paintings, your committee do not recommend any.

J. P. LEROY,
Chairman.

CLASS II.

Needle Work.

Best silk embroidery, Miss Louisa Bowman,..... $3 00
2d best " Mrs. W. L. Millis,..... 2 00

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Best worsted embroidery, Mrs. David Swan, ... $3 00
" ornamental needle work, Mrs. S. Hodges, ... 2 00
2d best " " Miss Abbie Bloss, ... 1 00
Best worsted collar, Mrs. A. H. Peck, ... 2 00
2d best " Miss Abbie Bloss, ... 1 00
Best case silk bonnets, Mrs. F. M. Greehy, ... 2 00
" ottoman cover, Mrs. S. B. Smith, ... 2 00
5 pieces of bead work, made by a blind boy, an inmate of the Asylum at Flint, —— Benedict, ... Dis. Prem.
2 fancy paper boxes, August Kronberg, ... Dis. Prem.
Case of coins and specimens from California, very fine, Mrs. A. F. Williams, and Mrs. E. B. Comstock, ... Dis. Prem.
1 piece of gimp work, Mrs. C. M. Predmore, ... Worthy of a Prem.
1 crotchet apron, ... Mrs. H. Walton.
Two gentleman's shirts, Mrs. M. A. Hodges, ... Dis. Prem.

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CLASS III.

Shell Work, &c.

Best ornamental shell work, Mrs. A. C. Baldwin, ... $2 00
2d best " " Mrs. E. Perkins, ... 1 00
Best specimen of wax flowers, Miss Julia Comstock, ... 2 00
2d best " " Mrs. W. L. Millis, ... 1 00
Best specimen artificial flowers, other than wax, (hair flowers,) Mrs. J. A. White, ... 2 00
2d best specimen artificial flowers, other than wax, (hair flowers,) Miss Mary Earing, ... 1 00
Basket wax fruit, Mrs. John Martin, ... Dis. Prem.
Best worked quilt, Mrs. A. Webster, ... 3 00

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CLASS IV.

Flowers.

Best and greatest variety of Dahlias, Mrs. A. B. Mathews, ... $2 00
2d best " " Mrs. Isaac Caskey, ... 1 00
Best single dahlia, Mrs. Isaac Caskey, ... 1 00
Best and greatest variety of indigenous flowers, Mrs. John L. Brownell, ... 1 00

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Best hand bouquet, flat, Mrs. M. L. Bagg,..... $1 00
" " round, Mrs. John Thomas,..... 1 00
2d best " " Mrs. M. L. Bagg,..... 50
Best and most beautiful arranged basket of flowers, Miss Mary A. Coates,..... 1 00
2d best and most beautiful arranged basket of flowers, Mrs. M. L. Bagg,..... 50
1 vase crystalized grass, Alvira Cowan,..... Dis. Prem.

Floral Hall is greatly indebted to Messrs. Hubbard & Davis, of Detroit, for a portion of its beauty and attractiveness, in the nature of dahlias and verbenas, which are well worthy of a premium.

DIVISION F.

CLASS I.

Butter, Cheese, Maple Sugar, &c.

Best 5 pounds butter in rolls, Mrs. J. E. Taylor,..... $2 00
2d best " " " Mrs. J. S. White,..... 1 00
Best 50 pounds butter, Mrs. James Bailey,..... 3 00
2d best " " Mrs. Wm. R. Jones,..... 2 00
Best new cheese, Mrs. Ira Murlin,..... 3 00
2d best " Mrs. Erastus Beebe,..... 2 00
Best loaf graham bread, Mrs. A. H. Peck,..... 1 00
" 2 loaves salt-rising bread, Mrs. Thomas Davis,..... 1 00
" 2 loaves yeast bread, Mrs. Levi Burlingham,..... 1 00
" 2 loaves Indian bread, Mrs. John H. Button,..... 1 00
" 10 pounds maple sugar, Dexter White,..... 2 00
2d best " " B. B. Redfield,..... 1 00
Best 5 gallons cane syrup, C. A. Carpenter,..... 2 00
Crock of lard, Mrs. E. L. Taylor,..... Dis. Prem.

The committee on Division F, Class I, respectfully report that owing to the large quantity of superior butter on exhibition, they find it extremely difficult to decide on the comparative merits of the various parcels, and are not sanguine in their opinion that they have done exact justice, but they have been actuated by a strong desire to approximate as near as possible to that result, and in so doing have awarded the above premiums.

J. VAN VALKENBURGH, *Chairman.*

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CLASS II.

Fruit.

Best 6 varieties good winter apples, 3 of each variety, Hezekiah Short,	$2 00
2d best 6 varieties good winter apples, 3 of each variety, C. Bullman,	1 50
3d best 6 varieties good winter apples, 3 of each variety, Seth Leonard,	1 00
Best 6 varieties good autumn apples, Wm. R. Jones,	2 00
2d best " " " A. Webster,	1 50
3d best " " " Mrs. E. Perkins,	1 00
Best 12 specimens of winter apples, S. B. Smith,	1 00
2d best " " Mrs. E. Perkins,	1 00
Best 12 specimens of autumn apples, D. C. Dean,	1 00
2d best " " Daniel Kimble,	50
Best 12 varieties of summer apples, Daniel Kimble,	1 00
" collection of apples, Melvin Drake,	2 00
" and greatest variety of pears, Samuel Rood,	2 00
" collection of autumn pears, O. M. Brownson,	1 00
" 10 specimens of peaches, A. B. Donelson,	2 00
2d best " " N. Voorhees,	1 00
Best peck of peaches, N. Voorhees,	2 00
2d best " Oscar M. Brownson,	1 00
Best 6 specimens of nectarines, Mrs. A. Whitehead,	1 00
" 12 quinces, W. H. Stout,	1 00
" peck quinces, W. H. Stout,	1 00
" dish grapes, Daniel Kimble,	1 00
" basket native grapes, Joseph Coates,	2 00
" 2 water-melons, N. Peacock,	1 00
" 2 nutmeg melons, O. M. Brownson,	1 00
" 2 citrons, Mason I. James,	1 00
Peck of cranberries, very fine, Mrs. L. V. Cole,	Dis. Prem.

CLASS III.

Vegetables.

Best 3 flat turnips, Thomas Davis,	$0 50
" 3 blood beets, G. J. Denison,	50

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Best 3 parsnips, J. B. Fritz, ... $0 50
" 3 carrots, Seth Burke, ... 50
" 3 onions, George Williams, ... 50
" 3 vegetable oysters, E. W. Peck, ... 50
" 3 heads cabbage, W. E. Pier, ... 50
3 heads cabbage, O. F. North, ... Very fine.
3 heads cabbage, A. N. Goble, ... Very fine.
Best 3 squashes, Joel Loomis, ... 50
" 3 pumpkins, Alvah Butler, ... 50
" peck lima beans, Jacob Hiller, ... 50
6 pumpkins, Curtis Babcock, ... Dis. Prem.
Best peck sweet potatoes, E. P. Harris, ... 50
½ bushel potatoes, (Russian,) Thomas Davis, ... 50
Basket carter potatoes, Z. B. Knight, ... Dis. Prem.
½ bushel pinkeye potatoes, John Thomas, ... Dis. Prem.
Basket of peppers, Mrs. A. Webster, ... Dis. Prem.
Greatest variety of roots for cattle, F. Bradley, ... 1 00

DIVISION G.

CLASS I.

Grain, Flour and Seeds.

Best sample barley, 2 bushels, L. Washburn, ... $1 00
" sample white oats, 2 bushels, E. C. Halsey, ... 1 00
" 12 ears seed corn, (King Philip,) Seward Redfield, ... 50
" bushel timothy seed, Wm. Lowes, ... 1 00
" bushel flax seed, E. H. Bristol, ... 1 00
" sample white beans, ½ bushel, Henry Pratt, ... 50
" " buckwheat, 2 bushels, J. P. Wyckoff, ... Dis. Prem.
" " millet, 1½ bushel, James Bradford, ... Dis. Prem.
" bbl. flour from least quantity of wheat, Hedges Paddack, .. 2 00
" " from any quantity of wheat, Hedges Paddack, .. 2 00

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DIVISION H.

CLASS I.

Female Equestrianism.

The committee on Female Equestrianism award the first premium to Miss Sophia Pixley, of Avon, and would recommend the same to Miss Elizabeth Fitch, of Pontiac. The committee are unable to make any distinction in making awards. Miss Fitch rode a powerful rough trotting horse, and at a rate of speed under three minutes to the mile, keeping her seat admirably, and managing her horse with great skill and self possession. Miss Pixley, on the other hand, was mounted on a very spirited, well trained horse, and rode without saddle. She exhibited an easy, graceful style of riding, not easily surpassed. The two ladies rode under circumstances so very different as to be scarcely subject to comparison, each being so nearly perfect in its kind.

The committee award to Class No. 1 the first premium for best trained saddle horse, rode by son of C. A. Green,..... $5 00

H. W. LORD,
Chairman.

CLASS II.

Miscellaneous.

2 melodeons, good instruments, well worthy the attention of the executive committee, made at Pontiac by..... S. R. Manton.

1 double reed melodeon, well worthy of notice, manufactured in Detroit by..... C. J. Whitney.

1 piece of statuary, first premium,..... Marsh & Brotherton.

1 piece of Italian marble,..... Marsh & Brotherton.

1 dulcimer, a good instrument and well worthy of notice,... M. Delano.

1 astrachan robe, a prime article, well worthy the attention of executive committee,..... O. R. Adams.

2 sets of ladies furs, a very choice article, foreign manufacture, ... O. R. Adams.

3 doors, 3 windows and sash, and 3 pair of blinds—these articles are manufactured by machinery at Romeo, in the county of Macomb, by..... G. H. Holman.

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Improvement in fastening window blinds, a good article, well worthy the attention of builders and others,.....F. B. Goodale.
1 dressed deer skin, first premium,.....Amos Moon.
1 bottle wild grape wine,.....Mrs. Perkins.
1 bottle currant wine, first premium,.....N. W. Clark.
1 bottle currant wine, second premium,.....Mrs. Hiram Walton.

At a meeting of the Oakland County Agricultural Society at the office of Moses Wisner, on the 16th day of October, A. D. 1857, present, John Thomas, President; Joseph R. Bowman, Secretary; Moses Wisner, Augustus C. Baldwin, Chauncey W. Green, John W. Howe, John M. Norton, Joseph D. Yerkes, Executive Committee.

The following accounts were then allowed, viz:

No. 44.	Wm. Hall, work on tent,.....	$7 00
" 45.	W. C. Sherwood, tent poles and work,.....	1 00
" 46.	H. S. Rinehart, services as police,.....	4 50
" 47.	Lyman Marsh, " "	6 00
" 48.	Chauncey W. Green, paid police,.....	8 00
" 49.	Wm. Hall, work on Fair Ground,.....	5 00
" 50.	Henry Frynton, " "	7 00
" 51.	Wm. Thorpe, " "	15 25
" 52.	F. O. Jones, carpenter work,.....	3 25
" 53.	C. C. Goodwin, blacksmith work,.....	2 00
" 54.	Geo. Thorpe, work on Fair Ground,.....	14 25
" 55.	N. Peacock, for pumpkins,.....	6 00
" 56.	Arthur Davis, "	9 00
" 57.	McConnell & Bacon, sundries,.....	1 94
" 58.	Thos. Smith, work ½ day,.....	50
" 59.	D. I. Pratte, carpenter work, poles and nails,.....	21 85
" 60.	Benjamin Going, pails and hoes,.....	2 13
" 61.	Edwin Parks, tin, nikel boxes, &c.,.....	2 75
" 62.	N. T. Thurber & Co., rope,.....	11 48
" 63.	M. E. N. Howell, for services as clerk,.....	4 00
" 64.	John Allen, services 3 days and 2 nights,.....	6 00
" 65.	J. R. Pearson, gate tender,.....	3 00

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The following communication was received through the Recording Secretary, and ordered to be entered on the records:

PONTIAC, Oct. 15, 1857.

MY DEAR SIR—Under the instructions of the Synod of Buffalo, I forward you the accompanying resolution.

Very Respectfully Yours,

CHARLES RING,
Temporary Clerk.

To J. R. BOWMAN, ESQ.,
Secretary of Oakland Co. Agrl. Society.

"*Resolved*, That the thanks of this Synod be returned to the Agricultural Society of Oakland County, for their polite invitation to attend the Annual Exhibition, and that the permanent Clerk be directed to send a copy of this minute to the Agricultural Society through Mr. Bowman."

—

Adjourned to meet at the Secretary's Office, January 11, 1858, at 10 o'clock in the forenoon.

J. R. BOWMAN,
Rec. Secretary.

—

At a meeting of the Executive Committee of the Oakland County Agricultural Society, held at the Office of the Recording Secretary, in Pontiac, on the 11th day of January, A. D. 1858, present, Charles Baldwin, Chauncey W. Green, John M. Norton, A. C. Baldwin, John W. Howe, Joseph D. Yerkes, Executive Committee, and Joseph R. Bowman, Recording Secretary.

The President being absent, C. W. Green was elected President *pro tem.*

On motion,

Resolved, That all discretionary premiums lay over until the next meeting of the Executive Committee.

The Executive Committee then proceeded to examine the Essays offered for premium, and awarded the first premium on Domestic Economy to Mrs. C. W. Green,..... $10 00

The 2d premium on Domestic Economy, to Miss Orpha Cressy, 5 00

C. W. Green was excused from voting on the above matter.

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The following accounts were then allowed, viz:

No. 66. Charles A. Howard, books, &c., ... $13 78
" 67. George Thorpe, work on Fair Ground, ... 28 13
" 69. Gleason & Patrick, printing, (bal.,) 28 50
" 68. J. R. Bowman, cash expenses for sundries, ... 34 78

The Board then adjourned.

J. R. BOWMAN,
Rec. Secretary.

—

At an adjourned meeting of the Executive Committee of the Oakland County Agricultural Society held at the office of the Recording Secretary on the 23d day of February, A. D. 1858, present, Rowland E. Trowbridge, President; J. R. Bowman, Recording Secretary; Chauncey W. Green, Marshal S. Hawley, A. G. Benedict, George H. Satterlee, William Whitfield, Moses Wisner, James Bailey, Aug. B. Baldwin, and Joseph D. Yerkes, Executive Committee.

On motion,

Resolved, That the following accounts be allowed, viz:

No. 71. E. F. Curtis, for fees, ... $14 00
" 72. A. S. Mathews, use of horse, &c., ... 6 00
" 73. John D. Millis, lumber, ... 29 86
" 74. Z. B. Knight, printing, ... 7 40
" 75. E. Perkins, police, ... 3 00
" 76. Chas. Ensign, work, ... 50
" 77. On motion, *Resolved*, That Jacob Hiller be and he is allowed one dollar for a pair of woolen stockings lost or stolen while on exhibition at the last Fair, ... 1 00

Resolved, That the resolution in relation to discretionary premiums be taken from the table.

Resolved, That it is inexpedient in the present financial condition of the Society to allow any discretionary premiums for the year 1857.

The Judges on Class 2, in Division B., horses for all work made an additional report, which was on motion accepted, and the premiums allowed as follows, viz:

114. 1st premium, 4 year old mare, J. G. Owen, ... $5 00
46. 2d " " " Jas. Bailey, ... 4 00
44. 3d " brood mare, J. M. Norton, ... 3 00

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23.	3d premium,	2 year old stallion, J. P. Holley,	$3 00
10.	1st "	3 year old mare, Wm. Dingman,	4 00
20.	2d "	3 year old mare, Daniel Whitfield,	3 00
60.	3d "	3 year old mare, Thos. Grow,	2 00
86.	1st "	2 year old stallion, J. D. Bancroft,	4 00
12.	2d "	2 year old stallion, L. Williams,	3 00

The Judges on Class 5, Division B., carriage and single horses, made an additional report, which was accepted, and, on motion, the premiums were allowed as follows:

91.	2d premium,	5 year old carriage mares, A. J. Reynolds,	$5 00
47.	Best	3 year old carriage mares, O. C. Crane,	4 00
66.	2d best,	2 " " " J. Clemens,	2 00
46.	3d best,	2 " " geldings, H. Walton,	2 00
45.	2d best,	5 " " mare, A. S. Palmer,	3 00
83.	3d best,	5 " " mare, R. H. Sliter,	2 00
11	Best	4 " " mare, Wm. H. Stout,	4 00
31.	2d best,	3 " " mare, Theron Murray,	2 00
28.	3d best,	3 " " mare, Thos. F. Gerls,	1 00
130.	Best	5 " " gelding, John Henderson,	4 00
48.	3d best,	4 " " gelding, C. Hagerman,	2 00
56.	Best	4 " " H. Rundell,	2 00
43.	Best	3 " " Lewis Whettle,	3 00
101.	3d best,	3 " " J. Durkee,	1 00
78.	On motion, *Resolved*, That the sum of seven dollars be allowed to Miss Lizzie Fitch for premium on Equestrianism, as recommended by Committee,		7 00

The following is the financial condition of the Society:

AGRICULTURAL SOCIETY,

In account with J. E. BEACH, *Treasurer.*

Jan. 2, 1857.	To cash on hand,	$ 53 93
	" received from County Treasurer,	256 66
		$310 59

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Contra Cr.

By paid premiums and orders to March 3, 1857,	$259 42
" counterfeit coin,	3 50
" paid C. A. Howard, Treasurer,	47 67
	$310 59

OAKLAND COUNTY AGRICULTURAL SOCIETY,

In account with C. A. HOWARD.

1857.		
March 3.	To cash of S. E. Beach,	$ 47 67
1858.	" counterfeit coin from S. E. Beach,	3 50
October.	" cash received for membership and admission tickets,	1,017 00
	" cash received for hay sold,	9 00
	" amt. received from J. R. Bowman, collected on subscription,	85 36
	" amount due Treasurer, to balance,	15 52
		$1,178 05

Contra Cr.

1858.		
Jan. 12.	By paid orders and premiums to this date,	$981 65
	" paid for hand stamp and seal,	7 90
	" deposited with J. A. Weeks, and now in his hands,	185 00
	" counterfeit coin,	3 50
		$1,178 05

C. A. HOWARD,
Treasurer.

The number of entries made were 1193, classed as follows:

Horses,	370
Cattle,	132
Sheep,	70

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Swine,	14
Poultry,	18
Farm Implements,	52
Cabinet-work,	3
Boots and Shoes,	2
Domestic Manufactures,	52
Painting and Daguerreotypes,	16
Needle-work,	48
Shell-work,	10
Flowers,	30
Butter, Cheese, &c.,	54
Fruit,	93
Vegetables,	111
Grain, Flour and Seeds,	70
Field Crops,	4
Female Equestrianism,	5
Miscellaneous,	39
	1193

—

The amount received for membership and admission tickets, was ten hundred and seventeen dollars—an increase over last year of one hundred and forty-five dollars and twenty-two cents.

The amount of Premiums awarded, to be paid in cash, is eight hundred and seventy-six dollars.

Pursuant to the resolution of the Society, a copy of the Annual Address of Gov. Bingham, delivered before the Society, was requested for publication, and the request declined by him.

The Fair gave entire satisfaction to its friends, and we believe was fully equal to the State Fair.

In closing this report, we would not forget the ladies of Pontiac and vicinity, as well as other parts of the County, for the interest manifested by them in the arrangement and decoration of the "State Fair Tent," used as "Floral Hall," and for the paintings, engravings, plants, minerals, needle, shell and wax-work, and other fancy articles furnished by them for such decoration, and for the good taste displayed in their arrangement.

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The Society is also under great obligations to the Officers of the State Agricultural Society, for the use of the tent belonging to said Society, and unanimously

Resolved, That the thanks of this Society be and they are hereby tendered to the Officers of the State Agricultural Society, for the use of the tent belonging to said Society, during the Fair.

We make the following extracts from the *Michigan Farmer:*

THE OAKLAND FAIR.

The Oakland County Fair of this year was superior to that of last year in many respects. One great improvement was setting up on the ground of the large tent used at the State Fair. This gave ample room for the fall display of fruits, flowers, paintings, needle work, &c., which last year were crowded into the hall of Domestic Manufactures, and had neither room nor light enough to show their real merits. The display in this tent was exceedingly beautiful, and attracted crowds of admirers from morning till night. The centre was ornamented with a moss-covered mound, over which were scattered a good variety of flowers, singly, and in clusters and bouquets, and the tent pole in the midst was almost concealed from sight by the spiral wreath of evergreens and flowers which wound their way from the floral pyramid to the top of the tent. Wreaths of evergreen were also hung around the entire circumference of the tent within, releiving it of the naked, unadorned look it usually has at the State Fair.

One half the space in the tent was devoted to fruits, the other half to needle work and the fine arts. The paintings made a beautiful show, but as we could only see them from a distance, for the crowd that was constantly around them, we shall not attempt a description. The specimens of fine needle work were very numerous and beautiful, especially the embroidered skirts, collars and childrens' clothes. There were also some quilted skirts very nicely done, which, if less showey, seemed to us more valuable than the embroidered ones. Among the miscellaneous articles in this department, were some dazzling pieces of worsted work for ottomans, lamp stands, &c., a basket of dried grasses, very pretty, Mrs. Perkins' ingenious shell work picture frames and flower vase, and a variety of other things curious and beautiful.

The show of fruit was excellent, the broad, simi-circular table, extending half round the tent, being well covered with fine collections of apples,

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baskets of luscious peaches, and tempting pears, grapes and melons. A large cranberry basket, woven of the vines and filled with berries, attracted much notice.

The hall of Domestic Manufactures presented the usual variety of gay colored patch work quilts, a good number of woolen blankets and coverlets, some of them of fine materials and beautifully woven patterns, and a larger pile of good, substantial, handsomely striped and evenly woven rag carpets than we remember to have seen at any fair before. In the same building was a hand loom of neat workmanship, weaming seamless bagging, and a number of musicial instruments on which skillful hands were playing to the delight of a listening crowd.

The butter, cheese, bread and honey made a most tempting display on the long table in the vegetable hall. No county that we know of brings out more or better specimens of bulter at its fairs than Oakland. We should like to give the names of the makers of those golden rolls, but can only say that the sight from over the railing was enough to gladden the eyes, and the fragance was most acceptable.

In the vegetable line, potatoes were not as plenty as they were last fall, but of good quality and size for table use. There were some delicious looking butter beans and evergreen sweet corn, beets, carrots, parsneps, and, indeed, every variety of roots usually grown; but the greatest novelty in this department was the mammoth squash, an enormous production, weighing over two hundred pounds. It was the centre of attraction to hundreds of curious eyes and experimenting fingers, and quite threw into the shade the big pumpkins and half bushel sized cabbage heads by which it was surrounded.

Specimens of the giant growth of the sweet sorghum and of the syrup made from it were also there, and bags of grain and clover seed and seed corn in abundance.

There was a very respectable show of farm implements for a County Fair, indeed a much greater variety than was shown at Ypsilanti. Among them we noticed the Young America Corn Sheller, delighting the farmers' boys by the lightning-like rapidity with which it performed its work; also plows, rollers, straw and stalk cutters, fanning mills, wagons, carriages and sleighs.

Once outside of the halls and looking over the grounds, one began to wonder where all the people and horses present could have come from. Thousands on thousands they thronged the entire enclosure, and

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crowded the street from far above the entrance gates to the town, almost blocking up the passage for more than half mile. It had far more the appearance of a successful State Fair than a single county exhibition. A great many fine carriage horses were on the ground, and sleek, strong, farm and draught horses in such numbers that one would wonder where work, food and stables were found for all. Among those of note, were Mr. Turner's celebrated Washtenaw Chief and his beautiful colt from Ypsilanti, Mr. Crofoot's Grey, and Mr. Eldred's Hambletonian.

There was a much larger show of cattle than last year, and most conspicuous among the blooded stock were the herds of the Messrs. Brooks, which have often been noticed in the *Farmer*. But no part of the cattle show pleased us better than the long array of noble looking working oxen and matched steers which extended nearly the length of one side of the enclosure. Along another side were the sheep and pig pens well filled with thriving specimens of those animals.

Of the stock we cannot of course be expected to speak critically, but from the immense numbers and the fine condition of the animals exhibited, there is good ground for saying that Oakland has cause to be proud of her possessions and of the improvements she is making.

From the *Pontiac Jacksonian:*

OAKLAND COUNTY FAIR FOR 1857.

It is with no ordinary feelings, that we record the great *triumph* of our Agricultural brethren, at their gathering, held in this place, last week. When we consider the difficulties to be overcome, and compare the recent Fair, the ninth in the series, with the first, we can witness and appreciate the gigantic strides our County has made, even in the short space of eight years. Ours is an agricultural population, but any one witnessing all the varied productions of the County, as they were displayed last week, cannot but feel that our people have devoted thought and intelligence to the development of the County's capacity, and that their fondest anticipations have been realized.

When these Fairs were first instituted, many good, conservative individuals, derided them. They thought it a useless outlay of money and time, to bring articles together merely for display, and, that the thing would soon lose its novelty, and Fairs be given up. Time has proven the fallacy of this reasoning, and they have become an *institution*, indispensable to the farmer, and one in which the truly enterpris-

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ing and intelligent enters with all his zeal. They have lived down opposition, and the object now should be to make them, in every respect, as advantageous to those interested as the time and means will permit.

We endeavored, a few weeks since, to give a few reasons why they should be patronized. Every person giving the subject a moment's reflection, will be able to advance scores of irrefutable ones in favor of their continuance. One that of a social nature, affords a profit sufficient to compensate for all the outlay. It enables the farmer to meet his brother farmer, form acquaintances, and learn the real character and value of the productions of the county.

But there are others of lasting profit. The man who remains at home, cannot learn the improvements around him in the breeds of stock, farming implements, kinds of vegetables, and all the various matters that characterize an inventive and industrious community. He may read of them, and yet form no adequate conception of their real utility. At the Fair he can see all in operation, have them explained, and learn more in ten minutes of *ocular* demonstration, than in a week's reading, through pages of description. And during the two or three days while the Fairs continue, the whole time can be profitably spent in a study of those things necessary to form a complete farmer, and he can acquire a knowledge that will afford matter for serious reflection, and furnish a solace to many of the moments that might otherwise pass away without profit. We trust the Fairs will continue, and for years hence our steady, toiling farmers will assemble, and vie with each other in presenting the best specimens of the productions of nature and art. The show of this year is only a presage of what may be done. All with whom we have conversed, and some of them are excellent as well as impartial judges, unite in saying that our County Fair excelled even the State Fair. Let us continue in this and the State Executive Committee, to save the State pride, will be compelled to substitute our County Fair for that of the State.

It is a difficult matter to enumerate all the articles presented. Almost every branch of industry was represented by creditable specimens. In the Fine Arts and Floral departments, the ladies exercised their usual taste and skill, in producing and arranging the many fine articles, so as to attract and please. Among them we saw many tasteful specimens of embroidery, and, what attracted some attention, a petticoat one hundred and ten years old! The Flowers, particularly the dahlias, could

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not be excelled. Messrs. Hubbard & Davis, of Detroit, contributed a fine and large variety of dahlias, verbenas, roses, &c., and thus added much to the display.

To say that the Fruit was equal to what our county usually produces is all the commendation necessary. The Vegetables were as fine as we ever saw. Everything in this department seemed to be on a mammoth scale. The squashes brought by our townsman, Joel Loomis, Esq., and Alvah Butler, Esq., of Troy, attracted much attention. There was a great quantity of bread exhibited, any loaf of which was a credit to the maker, and ought to entitle her to a choice for a husband among the hundreds of intelligent young farmers in the crowd. This is a branch of industry that ought not to be neglected, and the executive committee might, with not only safety but profit, extend the list of premiums for the different branches of the culinary art. There is no propriety in giving a man a premium for raising a mammoth potatoe or pumpkin, with the growth of which he has little to do, and not give the housekeeper one for making the varieties of bread, cake, pies, &c., that really require skill. Let her not be forgotten. Her labors make home happy and pleasant, her cooking makes eating sometimes desirable, and she is not only entitled, but worthy to have the premium lists in many respects extended in her behalf.

Among the productions of our county, there were several specimens of sugar cane syrup that was equal to any we ever tasted. That of J. D. Yerkes, Esq., of Novi, had a pleasant flavor, and would compare favorably with any of the refined syrups.

We also saw several specimens of wine. D. Hubbard, Esq., of Royal Oak, had some of his on the ground, not made for exhibition, but such as he manufactures in large quantities.

There was also a fine display of carriages, wagons, farming implements, farm machinery, &c., affording abundant opportunity to the ambitious farmer to select the best, and obtain new ideas as to the improvement of his own machinery and implements. A corn-sheller exhibited by J. C. Parsons, Esq., of Detroit, was a simple, cheap and excellent machine.

But the Stock department was the great centre of attraction to the masses. On no occasion, as we have been informed, has there been in this State, assembled for exhibition, a larger or better variety than that seen last week on our Fair Ground. There is a fine spirit of emula-

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tion between our cattle and horse raisers, that incites both to put forth their greatest exertions in their several departments, and use all due means for imprevement. It is impossible to enumerate the many fine specimens in both departments. The fine bull owned by John Thomas, Esq., the President of the Society, attracted much notice, and the Durham drove, exhibited by Mr. Brooks, of Novi, was worthy of all praise. To enumerate either the horses, or the cattle on exhibition, even if we knew who were the owners of the property, might appear invidious—suffice it, that all was worthy of commendation. The Messrs. Brooks, of Novi, are entitled to much credit from our farmers, for their exertions in introducing and improving our breeds of cattle, and we trust they will be suitably rewarded.

The show of horses was grand. Oakland county possesses many fine and valuable steeds, and we were pleased to witness so goodly an array of them on this occasion. Many of our farmers enter into the spirit of improving our horse stock, with much zeal and energy, and to C. W. Green, Esq., of Farmington, are we indebted for the arrangement, on the Fair Ground, for the exhibition of the fine stock of horses.

The horse, in all ages, has been considered not only an indispensable accompainment, but even a companion of man, and it is highly necessary that much pains be taken for its improvement. It costs but little more to raise a good cow, ox, or horse, than a poor one, and when the finest specimens are brought in contact with ordinary or inferior ones, all can witness the difference and learn the necessity for exertion.

The good points of a cow or ox, may be seen while quietly standing, but it is only when a horse is in action, that his good qualities can be best appreciated, and the "poetry of motion" be fully understood. We like to see a man enter into the spirit of his undertakings, and manifest a zeal for any speciality in which he may be engaged; and we wish every township contained scores of such men as Messrs. Brooks, Green, and others, who devote themselves to matters that enrich and improve an agricultural county, and tend to give it a favorable name.

The Equstrianism exhibited by Miss Fitch, of Pontiac, and Miss Pixly, of Avon, was excellent, and received high encomiums. We trust, at the next Fair, the false delicacy that deterred many from entering the lists on this occasion, will be overcome, and scores of ladies

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be ready to evince their skill in controlling the noblest of animals. If it is proper to ride on horseback at any time it certainly is at an Agricultural Fair.

One thing is quite apparent to even a casual observer. That is, that the grounds are not sufficient for the proper display of the articles now exhibited. If our Society increases for a few years to come as in times past, the lands will have to be doubled in quantity. Our farmers ought to look to this in season. They are the ones really interested, and who are to be most benefitted by these great annual gatherings, and they should provide ample accommodations for future exhibitions. In this county, one of the best agricultural ones in the State, they ought to insist that a sufficient portion of the taxes be employed for the purpose of increasing the usefulness of the Agricultural Society, and furnishing them rooms for the profitable display of their articles. We trust this matter may be taken in hand, and measures be taken soon to add to the present Fair Grounds, land sufficient for the wants of the Society. Our farmers now take a local pride in this matter, and the benefits resulting from fairs, are continually being developed, and no niggardly spirit ought to characterize any efforts in their behalf.

In another part of the paper, we give the List of Premiums awarded. It must not be supposed that there were no other articles worthy, for we know, in many instances it was a matter of the utmost difficulty for the various Committees to decide upon the superior merits of an article, and select it from its worthy competitor. Let no one be either dissatisfied or disappointed. When there is so much merit, as in the various competing articles, the Judges are the ones needing and deserving pity and commiseration.

Next year, we trust to see the fair of this season as much its superior to this, as this has excelled its predecessors. Until that one arrives, we will present to the counties of Michigan the Oakland County Fair for 1857, as the pattern one of the State.

From the *Oakland Gazette:*

Tuesday.—Preparations for the County Fair progressing. The State Fair tent and flags have been erected on the Fair Ground, and make a fine appearance.

Wednesday.—Morning opens fair and promising for the first day of the Fair. Gov. Bingham arrived to attend the County Fair. People

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from all parts of the county are coming, bringing their stock and the rich products of their farms and workshops for exhibition. Throughout the entire day the Clerks of the Agricultural Society were pressed with the work of issuing Membership and Entry Tickets. The number of animals and articles actually brought on to the ground is yet small, as but few of those entered will be brought till Thursday morning.

Thursday.—Morning was delightful, and very early our streets were thronged by Farmers bringing their stock, &c., to the Fair, and by Mechanics and Artisans with the products of their skill and labor, all wending their way to the Fair Grounds. The spacious grounds of the Agricultural Society were *too full* even at as early an hour as ten o'clock, and still an unbroken procession was moving on from down street. By noon, and from that time till four o'clock, the Fair Grounds and the entire street down to the Clinton River bridge, were thronged constantly. More than 5,000 people were present during most of the day. The display of cattle, of horses, of sheep, of vegetables, fruit, and of most other articles, was greater in number and better in quality than have yet been exhibited at our County Fair. It was with great delight and satisfaction that every one viewed the display. This day abundantly proved this Annual Fair a successful and brilliant one; and not only so, but proved another very important and striking fact, that as the agricultural products, the stock, and products of skill have improved during the short nine years' history of the Oakland County Agricultural Society, the *people* also have improved! We think no one who has been an attentive observer at our Fairs, during the past eight years, could fail to be attracted by this fact:—and it speaks volumes in favor of the Society, and this plan of competition and emulation.

Friday—Morning was cold and chilly; the sky was overcast, and a northeaster made it essential for comfort to wear overcoats. Yet early in the morning throngs were seen coming into town, and to the Fair Grounds. The Viewing Committees were busy completing their labors, they not having been able to effect this object Thursday afternoon, owing to the large number of articles entered, and the crowds of people. How they can describe which is the *best* among so many, we are unable to say; they must *guess*. At eleven o'clock the Annual Address was delivered by Governor Bingham. Of the Address we shall only say it was one of the best; and will, if possible, lay it before our readers at an early day. After the delivery of the Address, the Awards of

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Premiums were made by the Secretary of the Society, J. R. Bowman, Esq. In the afternoon every body was busy gathering together their articles and taking them home; and by four o'clock the grounds were mostly deserted.

Thus passed off in the most agreeable manner the most successful Fair yet held by the Oakland County Agricultural Society.

Many articles on exhibition deserve from us a notice, and shall receive it next week. Suffice it to say a squash weighing 156½ pounds, exhibited by Joel Loomis, Esq., of this town, and a pumpkin by Alvah Butler, Esq., of Troy, weighing 208 pounds. The vegetables generally were the largest and best we ever saw.

OTTAWA COUNTY.

No report received from Ottawa county.

SAGINAW COUNTY.

No report received from Saginaw county.

SANILAC COUNTY.

No report received from Sanilac county.

SHIAWASSEE COUNTY.

J. P. C. Emmons, Esq., *Sec'y Mich. State Agricultural Society*:

Sir—In conformity with the eleventh article of the Constitution of the Michigan State Agricultural Society, the following report is respectfully submitted for the year 1857.

The Shiawassee County Agricultural Society held its eighth Annual Exhibition in the village of Corunna, on the 7th and 8th days of October, A. D. 1857, and the attendance was as large, if not larger, than at any former exhibition, while the occasion was one of much interest in all parts of the county, if representatives are an index of prosperity and thrift.

We can say, without successful contradiction, that the Society is up-

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ward and onward; and, considering us as one of the *small* counties, we hope to make a *large* mark at the desk of the State Society.

Shiawassee is a grain-growing county. Although the south half is the best at this day, the north is not to be found wanting in its excellence for hay and the grass and spring crops, while the south holds the pre-eminence for wheat.

There is every variety of soil found in all parts of the county, while for productiveness it is second to none in the State. Corn has been exhibited at the County Fair formerly that yielded one hundred and twenty-six bushels shelled to the acre; oats fifty-four bushels to the acre; wheat thirty-six and thirty-eight and one-half bushels to the acre; a lot of three acres this year is reported to have yielded forty-two bushels to the acre; while for carrots seven hundred bushels have been raised; and hay is said to have averaged over two and one-half tons per acre.

For some years past a good deal of attention has been paid, and money expended, for the improvement of horses, cattle and sheep, while hogs and fowls have not been forgotten.

The lovers of horses are under obligations to T. C. Carr, of Corunna, and John P. Shaft, of Woodhull, for their efforts to improve the breed of horses by introducing the Morgan stock, without adulteration, from the celebrated stock of D. Hill, in Vermont.

Durham cattle are not strangers to the several localities in the county, and much first-class stock can be found amongst us.

To Isaac Gale and I. M. Hartwell, of Bennington, L. Lyman, of Shiawassee, R. W. Holley, of Vernon, and R. Burdick, of Byron, must be given the credit of first pioneers of Merino and Saxony sheep, which will favorably compare with any in any State of the Union.

A few, and a very few, of a good breed of hogs are in the county at this date; but the Suffolk has been introduced by C. R. Gilbert, of Corunna, Liberty Lyman, of Shiawassee, A. Sweet, of Vernon, and A. Van Auke, of Newburg, which covers all or nearly all, at this time. L. Lyman took the first premium in Suffolk boar and sow, as will be seen by Premium List for this year.

The following are the officers for the year 1858, elected at the Annual Meeting held on the 31st day of December, 1857:

President—Isaac Gale, of Bennington.

Vice Presidents—Hiram Pixley, Hazleton; A. Burch, New Haven;

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C. S. Searl, Fairfield; Lewis Hart, Rush; J. Cunnahaw, Scitio; F. C. Rathburn, Bennington; F. Ackley, Shiawassee; Wm. Newberg, Vernon; Chas. Wilkenson, Venice; Titus Yerkes, Caledonia; C. L. Goodhue, Owosso; J. H. Soule, Middlebury; J. P. Shaft, Woodhull; P. Austin, Perry; P. Cook, Antrim; R. Haverland, Burns.

Corresponding Secretaries.—John Willis, Hazleton; H. Wheeler, New Haven; J. A. Borden, Fairfield; J. E. Rush, Rush; Peter Laing, Sciota; E. Cook, Bennington; E. Eddy, Shiawassee; C. Chalker, Vernon; H. Lytle, Venice; Wm. Jewette, Caledonia; A. S. Williams, Owosso; G. W. Slocum, Middlebury; H. Oaks, Woodhull; J. Spaulding, Perry; J. W. Wright, Antrim; T. P. Green, Burns.

Executive Committee—C. S. Johnson, Caledonia; A. C. Bottsford, Byron; J. Spaulding, Perry; B. F. Bush, Shiawassee; B. O. Williams, Owosso; G. W. Slocum, Middlebury.

Treasurer—Chas. S. Kimberly, Caledonia.

Secretary—P. S. Lyman, Caledonia.

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TREASURER'S REPORT FOR 1857.

Resources.

1857.				
January 1.	By this amount to balance on hand,		$324	65
Oct. 7 & 8.	"	" membership and single tickets,	107	35
" 20.	"	" tax county treasurer,	245	50
	Total,		$677	50

Liabilities.

1857.				
Oct. 8.	To this amount premiums awarded,		$422	67
" 8.	"	" paid for tent,	9	88
Nov. 11.	"	" paid for printing,	49	25
Dec. 30.	"	" paid hay and postage,	10	00
" 30.	"	" paid contingencies,	13	00
1858.				
Jan. 10.	"	" on hand to balance,	172	70
	Total,		$677	50

JAMES CUMMINS, *Treasurer.*

Corunna, Jan. 10, 1858.

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LIST OF PREMIUMS

Awarded at the Eighth Annual Fair for the County of Shiawassee, held in the Village of Corunna, on Wednesday and Thursday, the 7th and 8th days of October, A. D. 1857.

—

BLOOD HORSES.

The Committee on Blood Horses beg leave to report as follows: That out of seventeen entries, (as many as were entered at the State Fair for 1855,) fourteen are deemed worthy of a premium, to wit:

Best stock horse, N. Cook, M. F. and	$6 00
2d best " S. Z. Kinyon,	5 00
Best 3 year old horse, S. S. Martin, M. F. and	4 00
Best 2-year old mare, J. Wallace,	3 00
2d best " " E. Cummins,	2 00
3d best " " S. Z. Kinyon,	1 00
Best 2 year old gelding, J. Wallace,	3 00
2d best " " S. Z. Kinyon,	2 00
Best 1-year old colt, B. W. Davis,	2 00
Best sucking colt, J. Wallace,	50
Best breeding mare and foal, S. Z. Kinyon,	4 00
2d best " " J. M. Hartwell,	3 00
3d best breeding mare and foal, J. Wallace,	2 00

Your Committee would recommend a liberal premium to No. 2, as a model mare, with an uncommon good color, and a gloss of the hair that is seldom excelled.

All of which is submitted.

G. TRUESDEL,
J. M. HARTWELL
P. M. ROWEL,
Judges.

—

HORSES FOR ALL WORK.

Best stock horse, E. Loomis,	$5 00
2d best " D. Wait,	4 00

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Best 3-year old horse,	J. Wallace,	$4 00
2d best " "	E. Eddy,	3 00
3d best " "	A. Purdy,	2 00
4th best " "	J. Davids,	1 00
Best 2-year old horse,	J. M. Hartwell,	3 00
2d best " "	R. McBride,	2 00
3d best " "	J. Dubois,	1 00
4th best " "	A. Purdy,	Michigan Farmer.
Best 1-year old horse,	A. Purdy, Trans. and	2 00
Best 2-year old farm horses,	A. Bennett, Trans. and	2 00
2d best 3-year old farm horses,	A. H. Owen,	2 00
Best farm horses,	A. C. Botsford, Trans. and	2 00
2d best "	C. D. Johnson,	2 00
3d best "	J. H. Hartwell,	1 00
Best carriage horses,	J. Watkinson, Trans. and	2 00
2d best " "	E. Eddy,	2 00
3d best " "	S. Watson,	1 00
Best 2 year old mare,	L. H. Parsons, Trans. and	2 00
Best breeding mare and foal,	B. S. Jones,	3 00
2d best " " "	S. Z. Kinyon, Trans. and	1 00
3d best " " "	L. H. Parsons,	1 00
4th best " " "	Dr. Bagg, Owosso,	Michigan Farmer.
Best horse in ring,	O. M. Converse,	4 00
2d best " "	G. Truesdel,	3 00
Best 3-year old mare in ring,	J. Fuller,	3 00
Best saddle horse in ring,	J. Darr,	3 00

Your Committee would say that in some awards there is a nice line to distinguish between many of the competitors, more entries having been made than at any former exhibition of the county, and we are encouraged to hope for a larger number on future occasions, as the Executive Committee have enlarged the list one-third from former years, as the superior qualities of some on the present occasion show.

We would ask, where are all of the stallions? as but few came under our inspection.

All of which we submit.

B. W. DAVIS,
H. H. BRADLY,
A. SHIPMAN,
Judges.

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DURHAMS.

Best 2-year old bull, D. Brooks,	$2 00
2d best " " R. H. Root,	1 00
Best 3-year old bull, H. Johnson, Michigan Farmer and	2 00
Best 1-year old bull, A. Dewey, " " "	1 00
" " heifer, D. Brooks,	75

Your Committee think that more animals of this class were on exhibition than at any former show, and that it cannot be disputed but that much attention has been paid to this kind of stock, and your Committee would ask all farmers and other breeders to turn their attention to them.

J. W. DEWEY,
J. WALLACE,
E. COOK,
Judges.

AYRSHIRES AND DEVONS.

No entries made in this Class.

CROSS AND BLOOD CATTLE.

Best cow, C. D. Johnson, Trans. and	$1 00
Best 3-year old heifer, C. D. Johnson, M. F. and	1 00
Best 1-year old heifer, E. Eddy,	1 00
2d best " " A. Dewey,	Michigan Farmer.
Best bull calf, C. D. Johnson,	1 00
Best heifer calf, C. D. Johnson,	Cultivator.

Much improvement can be seen in this class from previous years.

J. W. DEWEY,
J. WALLACE,
E. COOK,
Judges.

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GRADES.

We ask to report as follows, as many animals are of merit we deem the following the more meritorious:

Best bull, A. Stewart, ... $2 00
Best 2-year old bull, E. Cook, M. F. and 1 00
Best bull calf, E. Cook, ... Cultivator.
" " C. S. Johnson, ... 50
Best cow, C. S. Johnson, Trans. and 2 00
2d best " " " 2 00
3d best " J. C. Kingsley, ... 1 00
Best 3-year old heifer, E. Cook, ... 1 50
Best 2-year old heifer, L. Castle, ... 1 50
2d best " " L. H. Parsons, ... Michigan Farmer.
Best 1-year old heifer, S. Howe, ... 1 00
Best heifer calf, L. Castle, ... Cultivator.

We find it difficult to decide in many cases, as the qualities so nearly approximate to each other, especially in reference to the cows. Would it not be better for a statement to accompany the awards on claims of milch cow than as it is now?

THOMAS P. GREEN,
REUBEN GRIGGS,
MARTIN POST,
Judges.

—

NATIVES.

Best cow, C. Rhodes, ... $2 00
2d best, M. Potter, ... 2 00

This is all that we found entered in Natives; but as specimens of cows they are hard to be beaten.

Judges—Same as grade.

—

OXEN AND STEERS.

Best yoke oxen, E. Cook, ... Trans. and $3 00
2d best, H. B. Flint, ... Mich. Farmer and 2 00
3d best, M. L. Rogers, ... " " " 1 00

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Best 4 year old steers, E Cook,..... Mich. Farmer and $2 00
2d best, S. Howe,..... 2 00
Best 3 year old steers, J Wilkinson,..... 2 00
Best 2 year old steers, E. Cook,..... 1 00
Best yearling steers, E. Cook,..... 1 00
2d best, H. B. Flint,..... 75
3d best, L. H. Parsons,..... 50
Best steer calf, D. Brooks,..... Mich. Farmer
Best yoke steer calves, well broke, J. Vanderhoof, ... 1 00

A better display of working oxen never has been on exhibition before, and they would do credit to any county; for size, symmetry and docility are hardly to be excelled. The above report we beg respectfully to submit to the executive committee.

PETER GOLDSMITH,
ROSWELL ROOT,
LEMUEL CASTLE,
Judges.

—

SWINE.

Best Suffolk boar, L. Lyman,..... $2 00
Best grade boar, D. Bush,..... 1 00
Best Suffolk sow, L. Lyman,..... 2 00

The show is small; but we would recommend as worthy the attention of the farmers the Suffolks that were exhibited, as being good specimens of the breed, and decidedly a great improvement on the common ones, that may be found at every corner of the highways and hedges. Does not there seem to be an inaction in regard to the breeding of swine which should not be allowed to predominate; and is there not less interest taken in that than in the breeding of poultry?

WM. NEWBERY,
N. G. PHILIPS,
Judges.

—

SHEEP.

Best Spanish Merino buck, C. Rhodes,..... $3 00
Best French " " I. Burlingame,..... 3 00
Best grade buck, C. Rhodes,..... Trans. and 1 00

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The quality of wool could not easily be surpassed; but in regard to numbers, the County Fair has far excelled the present year in former exhibitions.

All of which is respectfully submitted.

A. PURDY,
J. SPAULDING,
E. COMSTOCK,
Judges.

—

POULTRY.

Best turkey, C. Rhodes,	$0 50
Best drake, C. Rhodes,	50

Your committee have nothing further to report.

J. L. GARDNER,
M. POST,
Judges.

—

BUTTER, CHEESE, BREAD, SUGAR AND HONEY.

We beg to report as follows:

Best 10 pounds butter, E. Rose, ... Mich. Farmer and	$0 50
2d best, F. C. Rathburn,	1 00
3d best, R. Haverland,	75
4th best, R. McBride,	50
Best lot cheese, O. E. Woolcutt, ... Mich. Farmer and	50
2d best, J. Gambel,	1 00
Best 2 loaves bread, S. Frain,	38
2d best, L. Lyman,	25
Best 2 loaves yeasting, S. Frain,	38
2d best, F. C. Rathburn,	25
Best Chinese sugar-cane syrup, R. Gulick,	2 00
2d best, R. Gulick,	1 00
Best 10 pounds maple sugar, O. E. Woolcutt,	1 00
2d best, F. C. Rathburn,	75
3d best, G. E. Moore,	50
Best 5 pounds honey, J. Barnes,	1 00
2d best, O. E. Woolcutt, ... Mich. Farmer.	
3d best, R. H. Root,	50

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We would call particular attention to the specimen of cane syrup of R. Gulick, of Byron, as containing the elements of a great cultivation and a larger profit than any other crop ever or now raised in this country. Mr. Gulick says that twenty hills will produce a gallon of syrup worth one dollar, making each hill worth five cents each, and no more trouble than to raise corn. He says that at the next exhibition he will have some crystalized, as the Fair came too early to do it this year. We would recommend a premium of seventy-five cents for one lot of sugar-cane stalks on exhibition, raised by Thomas Lyons, of Caledonia, which has matured the seed so that it will vegetate; it was raised with some Indian corn, and received no more attention than the corn cultivated; were both on new ground that was poorly ploughed in the Spring, and just cleared off.

The entries in this Class are as two to one compared to former years. All of which we submit.

D. A. BARTLETT,
WM. BARTLETT,
SAMUEL NICHOL,
Judges.

—

FIELD CROPS.

Best ¼ acre potatoes, 116¼ bushels, E. Rose,	$2 00
2d best, 107 bushels, C. Rhodes,	1 00
3d best, 78½ bushels, L. H. Parsons,	Mich. Farmer.
4th best, 75 bushels, L. H. Parsons,	50
Best acre wheat, 34 bushels, A. H. Owen,	Trans. and 2 00
Best lot of beans, G. Tuttle,	2 00
2d best, C. Rhodes,	1 00
Best ¼ acre of skinless barley, R. Haverland,	Mich. Farmer.
Best acre yellow corn, 210 bushels of ears per acre, D. F. Tyler,	2 00
Best bushel of wheat, G. E. Moore,	2 00
2d best, E. Cook,	1 00
3d best, A. H. Owens,	Mich. Farmer.
Best bushel of oats, C. Rhodes,	1 00
2d best, J. H. Hartwell,	Mich. Farmer.
3d best, E. Cook,	50
Best bushel of potatoes, C. Rhodes,	1 00

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2d best bushel potatoes, H. B. Flint, ... $0 75
3d best, D. F. Tyler, ... 50
Best 12 ears corn, dent, J. R. Thompson, ... Mich. Farmer.
2d best, J. Gambol, ... 50
3d best, J. Davis, ... 38
Best 12 ears white corn, E. Cook, ... Mich. Farmer.
2d best, R. P. Clark, ... 50
3d best, A. G. Edwards, ... 38
Best 12 years yellow corn, O. Woolcutt, ... Mich. Farmer.
2d best, B. F. Tyler, ... 50
3d best, E. Eddy, ... 38

Seventy-three entries made this year; a larger per cent than at any former one, and a show of field crops that can hardly be excelled. The variety of corn is hardly without number, and a nice line would it take to decide the merits of one sample over another. We beg to submit the foregoing and to be discharged for one year at least.

WM. FRAIN,
A. B. CHIPMAN,
D. LYON,
Judges.

FRUIT.

Your Committee find much difficulty in awarding Premiums on Fruit, as many samples were exhibited; that if any difference were to be seen in the articles, your Judges were not competent for their task; however, we ask to submit the following:

Best lot apples, S. Frain, ... $0 75
2d best, Wm. Morris, ... 50
3d best, E. Eddy, ... 25
Best lot peaches, O. E. Green, ... 75
2d best, L. H. Parsons, ... 50
3d best, " 38
4th best, Wm. Morris, ... 25
Best lot pears, H. B. Flint, ... 50
2d best, J. H. Hartwell, ... 38

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3d best lot pears, S. Nichols,	$0 25
Best lot quinces, L. H. Parsons,	50
2d best lot quinces, Mrs. J. Howe,	38
Best lot grapes, L. H. Parsons,	50
2d best, L. Castle,	38
3d best, G. Tuttle,	25
Best watermelon, R. P. Clark,	38
2d best, G. E. Moore,	25

We recommend to No. 9 a premium of 38 cents, belonging to C. McLaughlin; also to No. 20, a premium of 25 cents, both numbers representing apples as worthy of a premium. The last belonging to Thomas Lyons, being excellent and large.

J. H. HARTWELL,
APPOLLOS DEWEY,
WM. NEWBERG,
Judges.

GARDEN VEGETABLES.

Best lot beets, R. H. Root,	$0 50
2d best, J. W. Brewer,	38
3d best, R. Lyons,	25
Best lot squashes, Wm. Pate,	50
2d best, Lyman,	38
3d best, R. Piper,	25
4th best, C. McLaughlin,	18
Best white onions, J. W. Brewer,	50
2d best, R. Lyons,	38
3d best, R. P. Clark,	25
4th best, R. H. Root,	20
Best red onions, J. W. Brewer,	50
2d best, "	38
3d best, S. Frain,	25
4th best, G. Tuttle,	20
Best cabbage, H. B. Flint,	50
2d best, C. S. Kimberly,	38
3d best, L. H. Parsons,	25

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4th best cabbage, C. Rhodes,	$0 20
Best tomatoes, R. P. Clark,	50
2d best, O. E. Woolcutt,	38
Best lot carrots, S. Frain,	50
2d best, R. Lyons,	38
2d best, G. Tuttle,	25
4th best, R. Lucas,	20
Best pumpkins, J. R. Thompson,	50
2d best, J. Davids,	38
3d best, D. Brooks,	25
4th best, C. S. Kimberly,	20
Best celery, J. B. Barns,	50
2d best, A. G. Edwards,	38
Best turnips, G. Tuttle,	38
2d best, R. H. Moe,	25
3d best, R. Lyons,	20
Best rutabagas, R. Piper,	25
2d best, R. Lyons,	20
Best parsnips, R. Lyons,	25
2d best, R. P. Clark,	20
3d best, G. Tuttle,	18
Best sample madder, H. B. Flint,	1 00
2d best, S. Frain,	75
Best sample pie-plant, J. B. Barnes,	75

The duties of this Committee are too large for the amount of time, to award premiums, and some errors are the consequence of haste. Many valuable specimens of the vegetable kingdom were examined, and many more should have been awarded a prize. The display conveys to the mind that the exhibitors are not strangers to the soil, and the bending of the knee to mature some of the articles on exhibition.

N. GULICK,
WM. MORRIS,
JOHN THOMPSON,
Judges.

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DOMESTIC MANUFACTURES.

Your Committee, in presenting their report, would suggest the propriety of giving the Viewing Committees more time than was allowed this year, as it is impossible to do a half days work in two or three hours, at the most; and more than that is asked which is to give satisfaction to all exhibitors, saying nothing about the close *simile* that many of the articles partake of. We will say that many articles which were exhibited are highly creditable to the manufacturers. We would recommend that the list be enlarged the coming year, as many articles were exhibited that were worthy of a liberal premium, while only a few could be recommended by us. The worsted-work stocking yarn and stockings, we take the liberty to say, cannot be beat at this or at any other County Fair, for the year to come.

The entries exceeded any former year largely.

Best 10 yards woolen cloth, P. S. Lyman,	$2 00
2d best, P. S. Lyman,	1 00
3d best, F. C. Rathburn,	75
Best 10 yards woolen flannel, F. C. Rathburn,	2 00
2d best, P. S. Lyman,	1 00
3d best,	75
Best white woolen blanket, F. C. Rathburn,	2 00
2d best, "	1 00
Best wool blanket, G. E. Moore,	2 00
2d best, L. Castle,	1 00
3d best, "	75
Best 10 yards Union carpet, L. Castle, Michigan Farmer and	1 00
2d best, J. W. Brewer,	1 00
Best 10-yard rag carpet, F. Rathburn,	1 50
2d best " " S. Frain,	75
3d best " " J. W. Brewer,	50
Best white yarn, F. C. Rathburn,	1 00
2d best " H. B. Flint,	75
Best blue-mixed yarn, F. Rathburn,	1 00
Best pair wool stockings, J. W. Brewer,	50
2d best " " " "	38
3d best " " S. Frain,	25
Best pair ladies stockings, F. Rathburn,	50

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2d best pair ladies stockings,	F. C. Rathburn,	$0 38
3d best " "	J. W. Brewer,	25
Best pair cotton "	Mrs. B. F. Bush,	50
2d best " "	F. C. Rathburn,	38
3d best " "	" "	25
Best pair linen "	Mrs. B. F. Bush,	50
2d best " "	F. C. Rathburn,	38
3d best " "	" "	25
Best woolen mittens,	L. Castle,	50
2d best "	F. Rathbern,	38
Best counterpane,	M. L. Rogers,	2 00
2d best "	Emily Baker,	1 50
3d best "	Mary Castle,	1 00
4th best "	M. H. Lyman,	75
Best bed-quilt, patched,	R. Haverland,	1 50
2d best " "	F. Rathburn,	1 00
Best bed-spread,	Mrs. B. F. Bush,	2 00
2d best "	M. H. Lyman,	1 00
Best bed-quilt,	H. Rathburn,	2 00
2d best "	C. McLaughlin,	1 00
3d best "	Edward Rose,	75
Best plaid or colored flannel,	F. Rathburn,	1 00
2d best " " "	P. S. Lyman,	75
Best colored mittens,	F. Rathburn,	25
2d best " " " "		20

A woolen blanket or two is said to have been on exhibition, therefore if the exhibitors pay some attention to the rules and regulations, it may give him or her the reason why they did not get the premium.

ALFRED HILL,
MRS. A. COOK,
MRS. E. HARTWELL,
Judges.

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CLASS XXI.

Best cowhide boots,	E. F. Wade,	$1 00
2d best " "	C. F. Jackson,	50

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Best calf boots, seamed, H. H. Frost,	$1 00
2d best " J. Golden,	50
Best fancy boot, " "	1 00
Best calf boot, pegged, E. F. Wade,	1 00
2d best " " J. Golden,	50
3d best " " H. H. Frost,	38
Best kip boot, H. H. Frost,	1 00
2d best " E. F. Wade,	50
Best men's slippers, H. H. Frost,	50
Best women's boots, C. F. Jackson,	1 00
Best sample leather, " "	75
2d best " " "	50
Best boot-case, J. Golden,	50

Your Committee would say that specimens of work were exhibited that would do honor to any exhibition of the kind in this State or any other; and further they only ask to be discharged.

WM. COCHRANE,
B. HAVERLAND,
EDWARD ROSE,
Judges.

CLASS XXII.

Best window-sash, Ambler Weeden,	$1 00
2d best " Buck & Bebee,	75
3d best " J. M. Thayer,	50
Best panel door, Ambler Weeden,	1 00
2d best " Buck & Beebe,	75
3d best " J. M. Thayer,	50
Best cook-stove, E. C. Moore,	1 00
" parlor " " "	75
2d best " " " "	50

NEEDLE, SHELL AND WAX WORK.

The Committee find in their examinations that many articles are exhibited that are not found in the Premium List, and here recommend

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a premium in many cases, as many articles of superior merit, and do credit to the taste, style, and ingenuity of the operator. Many of the articles are so nearly equal in merit that we could not and have not adjudged between them, viz: The needle-work on bonnets and embroidery may be named.

Whose labor has produced the articles, have an industrious principle and a skill in the use of the needle that they are competent for higher stations, and would do honor at the head of any assembly of learned ones in their art.

Best ottoman cover, Emily Baker,	$1 75
2d best " " Mrs. D. Bush,	1 50
Best silk bonnet, Mrs. Gale & Co.,	1 50
2d best " Mrs. J. Kingsley,	1 00
Best straw bonnet, " "	1 00
2d best " " Mrs. Gale & Co.,	75
Best union " " "	1 50
2d best " " Mrs. J. Kingsley,	1 00
3d best " " " "	75
Best velvet bonnet, 2 articles of so near a quality and workmanship that we award one dollar to each, Mrs. J. Kingsley and Gale & Co.,	1 00
Best corded silk bonnet, Gale and Co.,	50
Best embroidered skirt, Jeanette Barns,	1 00
2d best " " H. A. Goodall,	75
Best " collar, B. F. Bush,	1 00
2d best " " A. A. Fitch,	75
3d best " " B. F. Bush,	50
Best specimen embroidery, J. Barns,	1 00
Best embroidered dress, J. Wild,	1 00
2d best " " E. Rose,	75
Best embroidered undersleeves, B. F. Bush,	1 00
Best crotchet tidy, A. A. Fitch,	50
2d best " " B. F. Bush,	38
3d best " " Mrs. R. Rogers,	25
Best basket shell-work, R. Phelps,	50
2d best " " Ruth Phelps,	38
3d best " " " "	25

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Best cake-tidy, L. Lyman,	$0 50
Best worsted bouquet, J. Dibble,	50
2d best " " D. Bush,	38
Best what-not, Ruth Phelps,	50
2d best " Mrs. E. C. Kimberly,	38
Best netting, L. Lyman,	50
" " tidy, E. F. Wade,	38
Best embroidered table-spread, M. Gibbs,	1 50
Best lamp-mat, D. Bush,	50
2d best " J. Dibble,	38
3d best " M. Gibbs,	25
Best Shetland shawl, M. C. Williams,	1 00
Best card-basket, J. Dibble,	38
2d best " M. S. McLaughlin,	38
Best hair-wreath, A. A. Fitch,	60
Best toilet-cushion, M. S. McLaughlin,	50
Best fancy tidy, A. G. Edwards,	50
Best worked skirt, Jeanette Barnes,	50

We the undersigned ask to be discharged, and submit the above report as the best of our ability.

MRS. E. F. WADE,
MRS. S. L. PARSONS,
MRS. B. F. BUSH,
MR. C. S. KIMBERLY,
MR. W. H. PAIN,

Judges.

—

PAINTING, &C.

Committee on Painting, Drawings and Shades, report as follows: That our county possesses talent in this line of the highest order, and if a chance should be afforded, they may be expected to be found ranking among the first artists of the country, and become an honor to the State.

Best specimen of job printing, Henry H. Smith,	$1 00
Best oil painting, Julia Todd,	3 00

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2d best oil painting,	$1 00
Best water-color painting, Mary C. Williams,	1 00
2d best, S. E. Galasha,	75
3d best, Mary C. Williams,	50
Best crayon drawing, Mary Gould,	1 00
2d best, Emma Williams,	75
Best street view, J. Bush,	1 00
Best monochromatic painting, Mrs. B. F. Bush,	1 00
Best crystal painting, Mrs. M. S. Bush,	1 00
2d best, Mrs. D. Bush,	75
3d best, Mary S. McLaughlin,	50
4th best, Mrs. O. M. Converse,	25
Best lithograph painting, E. H. Gage,	1 00
2d best, E. H. Gage,	75
3d best, Julia Ladd,	50
4th best, Mrs. O. M. Converse,	25
Best Grecian painting, C. A. Phelps,	75
2d best, J. Bush,	50
3d best, C. A. Phelps,	25
Best specimen of ambrotypes, J. Bush,	75
2d best, J. Bush,	50
3d best, H. H. Mowe,	25
Best specimen of penmanship, S. E. Galasha,	75
2d best, S. E. Galasha,	50

One parrot found among the paintings says he "can't talk," but wants crackers, is a lively green yellow, long hooked bill, and glossy plumage, is a favorite with all visitors, would recommend a premium of fifty cents.

We, your committee, would say that they hope for the credit of the exhibition, and to develop the fine genius of the county, that a large list be returned for coming years; for all the elements of wealth and prosperity are just in proportion to the advancing of the sciences and fine arts of a community where they abound, which tends to improve the taste, purify the understanding, and elevate the mind. We find in

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this department the elements of a higher genius than is to be found level with the dust of mediocrity.

R. F. GULICK,
GEORGIANNA WEBB,
CORDELIA HASCALL,
HELEN BEACH,
M. H. LYMAN,

Judges.

—

NATURAL AND ARTIFICIAL FLOWERS AND PLANTS.

Your committee will ask to report as follows, and then be discharged, for of the many a ticles that are meritorious, they cannot say of many which is the best, but recommend the following:

Best lot of home plants, M. H. Lyman,	$2 00
2d best, E. F. Wade,	1 00
Best dahlia, Ruth Phelps,	50
Best vase of tissue flowers, Maria Green,	1 00
2d best, Maria Green,	50
Best canary birds and cage, decorated, R. Robinson,	1 00
2d best, E. F. Wade,	75
3d best, M. Tuttle,	50
Best rose geranium, M. H. Lyman,	1 00
2d best, Ellen Smith,	50
Best oleander, M. H. Lyman,	1 00
2d best, Mrs. E. C. Kimberly,	75
Best abeautiland, Mrs. E. C. Kimberly,	1 00
2d best, M. H. Lyman,	75
Best sunflower, G. Tuttle,	50
Best margin leaf geranium, M. H. Lyman,	1 00
2d best, M. H. Lyman,	75
Best lilly, Mrs. E. C. Kimberly,	50
2d best, E. F. Wade,	38
Best monthly rose, M. H. Lyman,	75
Best floral design, Ruth Phelps,	1 00
2d best, Ruth Phelps,	75
Best Jerusalem cherry, E. F. Wade,	50
Best Fuschia, M. H. Lyman,	1 00

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Best cactus, E. F. Wade,	$0 75
2d best, M. H. Lyman,	50
3d best, E. F. Wade,	25
Best round bouquet, R. Phelps,	1 00
2d best, R. Phelps,	50
Best flat bouquet, E. F. Wade,	1 00
2d best, R. Phelps,	50
Best bridal rose, M. H. Lyman,	1 00
Best basket of flowers, Mrs. E. C. Kimberly,	75
2d best, C. Jackson,	50
3d best, H. A. Goodell,	25
Best German aster, Liberty Lyman,	75
Best Lemon tree, C. Pond,	50
Best variety phlox, Liberty Lyman,	75
2d best, M. H. Lyman,	50
Best sample flowers, R. Phelps,	75
Best indigenous flowers, L. Lyman,	75

The sunflower had thirty auxiliary flowers, and was fifteen feet high, with main stem three and one-half inches in diameter, or nearly eleven inches in circumference; there was three-eighths of a bushel of seed, worth at the oil-mill thirty-five cents, all grown on the space of about two feet square, in the garden of Gary Tuttle, and he says not very well tilled at that.

Mrs. J. MARTIN,
Mrs. G. BUSH,
Miss C. PHELPS,
Judges.

—

FARM IMPLEMENTS.

Best open buggy, E. H. Gage,	$1 00
Best corn-planter, J. H. Hartwell,	1 50
Best churn, S. L. Parker,	75
2d best, E. C. Moore,	50
Best straw-cutter, E. C. Moore,	Trans.
2d best, Hakes & Andrews,	75
Best workmanship in plows, Hakes & Andrews,	2 00

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2d best workmanship in plow handles, Hakes & Andrews,		$0 50
Best fanning-mill, Pettibone & Co.,	Trans. and	1 00
Best cultivator, E. C. Moore,	Mich. Farmer.	
2d best,	"	50
Best cider-mill,	"	50
Best ox-yoke,	"	50

Not as large a collection of articles as last year. The plow is a model of workmanship, and does credit to the makers.

S. FRAIN,
G. L. HITCHCOCK,
E. REYNOLDS,
Judges.

—

MISCELLANEOUS ARTICLES.

1 double-barrel rifle, A. G. Edwards,	$2 00
Melodeon, S. H. & F. W. Burgass,	2 00
Hour-glass stand, G. McLaughlin,	50
Stope-pipe machine, R. L. Stewart,	2 00
Sample grape wine, J. Barnes,	1 00
Sample stove-pipe, R. L. Stewart,	1 00
Shock mat, Mary S. McLaughlin,	50

We think there were many articles entered in this Class that should not have been here, but we think the above only worthy of mention, and of the balance we have nothing to say.

I. L. MILLER,
G. L. HITCHCOCK,
Judges.

—

The officers of the Society would tender their thanks to the Corunna Brass Band for the rich strains of music discoursed by them upon the occasion of the late Fair; and are of opinion that as a band, they are hard to beat, and hope that their melifluous strains may never cease to reverberate until time shall be no more.

The amount taken at the two gates was one hundred and seven dollars and thirty-five cents, which, with the amount now in the Treasurer's

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hands, which is three hundred and fifty dollars, making in all the sum of four hundred and fifty-seven dollars and thirty-five cents, which sum will be used to pay the premiums as fast as presented.

The Fair Grounds have been enlarged nearly one-half the past year and are now found to contain no more room than is necessary, which cannot but be considered as evidence that the Society is in a flourishing condition.

We would call particular attention to the Annual Meeting, which will be held at the Court House in the village of Corunna, on Thursday the 31st day of December, A. D. 1857, at 1 o'clock P. M. An invitation is given to all to take a part in this meeting, as there is ample room in the house.

The business of the meeting will be to elect officers, and make a premium list for the coming year; also any other business that may come before them.

ISAAC GALE,
President.

P. S. LYMAN,
Secretary.

ADDRESS

Delivered by REV. RICHARD KAY, *before the Agricultural Society of the County of Shiawassee, at the Annual Fair, held at Corunna, October* 8, 1857.

LADIES AND GENTLEMEN:

I am happy to have it to say, that our County Fair, now so soon to close, discovers improvement creditable to the members of this Society and the inhabitants of our county at large. In coming to our Fair from a remote corner of Shiawassee, one sees the foot-prints of industry and the marks of improvement at every town. The ancient forest is being subdued, and new settlers of enterprising character are coming in. Among other improvements we notice particularly that the very important work of draining our swamps, marshes and "cat holes," has been fairly commenced—a work which needs only to be well begun to insure its continuance—and it will be found that no farm-work is more profitable than that laid out in a judicious system of drainage. It is not, however, until the thickets are removed, and the stagnant water set

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in motion, and the winds of heaven, uncontaminated with miasma, sweeps across these places, and the plow and cultivator have turned the wilderness into a fruitful field, that we can hold this species of improvement in due appreciation.

An improvement in stock is also quite apparant, though only in its beginning. Something has been done—more is imperatively called for. For while older counties discover greater abundance, we believe there is no county in the State in which the quality of improved stock which we have here in Shiawassee, is excelled. And it is to be hoped that our farmers in general will give to this branch of improvement the consideration to which it is entitled. * * * We know that every innovation is not an improvement. What we insist upon is: "Prove all things; hold fast that which is good;" thus uniting stability with progress, and conservatism with reform.

The springing up of nurseries and the planting of orchards so abundantly, speak well for the future of our county. The increase of wholesome fruit will conduce to the health of our people and increase their income; and the forethought and care for the future, so apparent in the matter, encourage the hope of still better things before us.

The introduction from abroad of grasses and herbage by which our pastures and meadows are to be supplied with additional richness, is to encouraged. And the importation of other exotics with these, although unavoidably attended with failures, we must yet hail as one of the most auspicious signs of the times. We look with no little interest on the efforts of our government in this line, through the Patent Office. And we hope that the seeds thus distributed will receive all due attention, until foreign plants, naturalized and improved by cultivation, shall add to our means of subsistence and beautify our gardens and shrubberies.

It is a most encouraging circumstance that the ladies of Shiawassee county take much pains to give an interest and finish to our exhibition of products. They may rest assurred that their efforts are appreciated. Their presence on the occasion of our Fairs, is indispensible. * *

While I go with you into every laudable improvement, I trust you will go with me in regard to another—not often mentioned on occasions like this—namely: Self-culture and Family Improvement. Every antecedent improvement terminates on the family—the wealth and convenience of this little community is increased. * * *

All the natural sciences unite their influence for the benefit of the

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agriculturist; and by their action, give dignity to the profession. Who that marks the progress of the times will deny that Agriculture now holds its place among the learned professions? Minerology and geology exhibit the qualities of your soil, and "the treasures hid in the sand." * * * Thus it is that the natural sciences unite their influence for the benefit of those who cultivate the soil. And if they dignify your occupation and insure your resources, do they not require something of you in return? Do they not call for the cultivation of the mind as well as the soil?—and especially that your children may draw meat and drink? Who could wish to be set back again?—that the dial should go backward twenty-five or thirty years! But who does not acknowledge that, for the improvement of that period in facilities and thrift, we are largely indebted to science? If she has aided us, we must sustain her, or she will certainly die out from among us, or retire. It is scientific progress on the one hand, or a retrogression into the old stultified routine on the other. If we fall back into the old, stereotype dullness of times past, dignity and energy will also be found to have taken their departure; and our agriculturists must yield the place they now occupy. A wiser people from the east, who have entertained the angel—Science—that we neglected, will come in. With skill on the one hand, and ignorance on the other, the result cannot be doubtful. Alas! power and influence would soon pass out of our hands, and with these the land of our possession. This is only what has transpired in places a little older than our own. We know of some neighborhoods where there has been in this way almost an entire change of population; and of the old settlers and remnants of their families who still linger there, you can find but one or two in a neighborhood, who has not fallen far behind in respectability and property. One of these, perhaps, keeps up his pecuniary respectability by a sort of business to which his more intelligent (and certainly not less virtuous) neighbors from the east would not stoop. He enjoys a monopoly, and, in popular language, is said to be "doing well."

It is not enough, then, that our "Common Schools" be not neglected. Every farmer's house should be supplied with the means of improvement, in the shape of books, papers, and other facilities. Let the winter evenings—instead of fun and frolic and vapid nonsense on the one hand, or the impatient monotony on the other—exhibit a search after knowledge, and a growth in every social and public excellence. The

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expenditure will be trifling—very trifling compared with what, without this, you must lay out, directly or indirectly, to pay the "show-man" and the fiddler, and to patronize the dancing-master and the ball-room. Increase domestic comfort and happiness by manly virtue and intelligence, and they will lead to public usefulness and honor. While, therefore, we say, "Give us good crops of corn and wheat, and supply our markets with good sheep and cattle," still more earnestly do we entreat you, "Give us good families"—"That our sons may be as plants grown up in their youth; that our daughters may be as corner-stones polished after the similitude of a palace." How much of latent talent would be brought out! and how much of sound practical judgment would, in this case, find its way into the counsels of our nation, and our judiciaries—supreme and subordinate—departments now notoriously in want of it. We hold that there is but one other so good as the School, on earth, for the formation of a sound practical judgment concerning secular things, and that is the camp." The mistakes and failures of the lawyer or statesman may often be covered up and lost sight of in the multitude of words, and the smoke and dust of party collision; and those of the physician are oftentimes covered up in the grave. But the mistakes of the husbandman are disappointment, loss and poverty, in open and manifest connection with their cause; and the mistakes of the military leader are defeat and infamy and death. No wonder that the soldier, *trained in such a school,* often excells as a statesman, and the farmer as a soldier and statesman too.

Let the fine arts, if convenient, be appended by the fairer sex, and when a decided talent for learning is developed among the young men, let such receive the finish of a higher education. But in all cases, sound learning and common sense must stand pre-eminent. The language of Shakspeare and Milton must not be neglected to cultivate an acquaintance with French, German or Spanish; and in no case let us witness the incongruity in a farm-house of hands which have never learned to make a good roll of butter or a loaf of bread—but only to ply the pencil or finger on the key-board.

One thing more we must not forget to mention. That as cultivators of the soil, men sustain other relations than those already mentioned. We are a part and parcel of God's great moral kingdom, and on Him our dependence is absolute, universal and forever. He it is that giveth us rain from heaven and fruitful seasons. The eyes of all wait on Him

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and he giveth them their portion of meat in due season. New inventions have done much for the Agriculturist; but their influence is only subordinate and subsidiary. Your business stands in all the sublimity of old relationships. If it pleases God to send us "rain and fruitful seasons," we shall reap abundance, although new inventions were never thought of, and the sciences were yet unknown. But if he covert in anger, of what avail new inventions, and all arts and sciences?

Why is it, then, that while we are smarting under Divine corrections our Agricultural journals (for most part) seem steduously to ignore the fact, though of most importance to be known? What is the potato rot? What the Hessian fly and the wheat-midge, but the instruments of His will? How remove the evil or retard its progress? As the cause is moral, so must be the remedy. To propose analysis and experiment instead of reform, to substitute disquisition for repentance, is absurd and criminal. Will our wise men go on in this folly until forced, with the Egyptian magi, to own "the finger of God?"

We do, therefore, owe it to ourselves, as men of reason and intelligence,—we owe it to pure philosophy and science,—we owe it to our families and neighbors,—our common Christianity claims it as an honor due, to acknowledge, in all our vast and minor interests, as cultivators of the soil, the dominion and ever-active providence of God. And, my friends, if other sciences, connecting themselves with your peculiar business, *ennoble it*, how much more that science which pertains to our moral and inferior relationships, which, indeed, involves all other sciences, and is itself Divine! If they be auxiliaries to build up a fortune, this will be found effective "for that life that now is and that which is to come."

ST. CLAIR COUNTY.

No report received from St. Clair county.

ST. JOSEPH COUNTY.

No report received from St. Joseph county.

TUSCOLA COUNTY.

No report received from Tuscola county.

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VAN BUREN COUNTY.

PAW PAW, August 11th, 1858.

R. F. JOHNSTONE, ESQ.:

SIR—I received a line from you, requesting me to transmit to you a statement of the transactions of the Van Buren County Agricultural Society, with a list of the premiums awarded for the preceding year. I sent a report to J. P. C. Emmons, Esq., several months since. I will now send one to you—it is a printed copy, one which I have used, but I have no other, therefore please excuse the marks on it.

We received two hundred and seventy dollars and thirty-eight cents and there is now due the Society sixty dollars. We paid out two hundred and seventy-seven dollars and fifty-five cents.

We are endeavoring to locate our Fair for the next five years.

Our Fairs have increased in interest from year to year. It was said that the Fair last fall exceeded any previous Fair held in this county.

The agricultural or farming interest has steadily increased from year to year until now it is thought that there is double the interest there was when our Society was organized. In short, it has proved a mighty stimulus to the farmers of Van Buren county.

If there should be anything which I have omitted which will aid you, or be of interest, I will cheerfully aid you.

Yours respectfully,

O. H. P. SHELDON,

Secretary Van Buren Co. Agricultural Society.

LIST OF PREMIUMS

Awarded October 7th, 1857, by the Van Buren County Agricultural Society.

HORSES.

Stallions—Full Blood.

Best stallion, Messenger, 3 years old, F. W. Clary,	$4	00
2d best " Prince Albert, 6 years old, R. J. Vanderveer,	3	00
Best stallion, Blucher, 2 years old, Leonard Halsted,	3	00

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Grade Stallions.

Best 7-year-old,	H. Ismon,		$3 00
2d best 6-year-old,	R. Williams,		2 00
Best 3 "	Simeon Howland,		3 00
2d best 3 "	A. G. Wellden,		2 00
2d best 2 "	Amos Palmer,		2 00

—

Domestic.

Best brood mare, 7 years old,	L. R. Anderson,		$3 00
2d best " 6 "	D. O. Dodge,		2 00
Best mare, 5 years old,	A. Sloan,		3 00
" " 4 "	John Barker,		2 00
Best mare colt, 3 years old,	D. Morris,		2 00
2d best " 3 "	S. Mills,		1 50
Best " 2 "	R. Morrison,		2 00
2d best " 2 "	N. M. Pugsley,		1 50
Best " 1 "	Z. Pelton,		1 50
2d best " 1 "	P. Harwick,		1 00
Best mare colt, under 1 year old,	D. O. Dodge,		1 00
2d best " " 1 "	John Pelton,		75

WM. HILL, Paw Paw,
ALEXANDER SLOAN, Hamilton,
JOHN CAMPBELL, Almena,
Committee.

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Best single horse, 6 years old,	Mrs. C. Hawley,		$3 00
2d best " 6 "	S. F. Hawley,		2 00
Best " 4 "	Alex. Sloan,		3 00
Best horse colt, 3 years old,	D. Morris,		2 00
" " 2 "	R. Mather,		2 00
" " 1 "	A. S. Downing,		1 50
2d best " 1 "	Phillip Starks,		1 00
Best horse colt, under 1 year old,	Samuel Lull,		1 00
2d best " " 1 "	L. R. Anderson,		75
Best pair matched carriage horses, 8 year old,	A. T. Norton,		4 00
2d best " " " 5 "	H. B. Olds,		3 00

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Best pair matched horses for all work, 5 yrs. old,					Peter Harwick,	$4 00
2d best	"	"	"	8	" H. Ismon,	3 00
Best pair matched colts, 4 years old,					S. Hayden,	3 00
"	"	"	3	"	J. Armstrong,	2 75
"	"	"	1	"	Jos. Gilman,	1 75

E. SOUTHWELL, Lawrence,
J. H. WHITE, Lawrence,
A. B. COVEY, Waverly,
Committee.

CATTLE.

CLASS I.

Full Bloods and Grades.

Best Durham bull, 6 years old,					Amos Palmer,	$4 00
2d best	"	5	"		G. F. Harrington,	3 00
Best	"	3	"		B. F. Williams,	3 00
Best Durham cow, 5 years old,					Amos Palmer,	4 00
2d best	"	7	"		G. F. Harrington,	3 00
Best Durham heifer, 3 years old,					Mrs. P. Barnum,	3 00
Best bull calf, 2 months old,					Alfred Barnum,	1 00
Best Devon bull, 4 years old,					Harrington & Branch,	4 00
"	"	1 year old,			A. C. Tuttle,	1 75
Best Devon cow, 6 years old,					" "	3 00
2d best	"	6	"		D. H. Manley,	2 00

Grades.

Best grade bull, 1 year old,					N. M. Pugsley,	1 75
2d best	"	1	"		C. D. Grimes,	1 00
Best grade calf,					S. Halsted,	1 00
2d best	"				E. Durkee,	50
Best grade cow, 4 years old,					Silas Engle,	4 00
2d best	"	4	"		E. Branch,	3 00
2d best grade heifer, 3 years old,					Amos Palmer,	3 00
Best	"	2	"		M. L. Fitch,	2 00

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Best grade heifer, 1 year old,			James Bale,	$1 75
2d best	"	1	" Alfred Barnum,	1 00
Best grade calf, 4 weeks old,			E. Branch,	1 00
2d best	"		John L. Van Ness,	50

C. G. GEORGE,
J. A. RANNY,
G. B. CHAPIN,
Committee.

CLASS II.

Domestic Cattle.

Best working-oxen, 5 years old,			Alex. Sloan,	$3 00
2d best	"	8	" W. M. & M. N. Fox,	2 00
Best steers, 4 years old,			Dean,	2 50
"	"	3	" J. Van Auken,	2 00
2d best	"	3	" Wm. Knowles,	1 50
Best	"	2	" J. & D. Abrams,	1 50
2d best	"	2	" Orrin Sisson,	1 00
Best	"	1	" Robert Orr,	1 00
2d best	"	1	" Samuel Hayden,	75
Best cow,		7	" E. Barnum,	2 00
2d best	"	8	" N. M. Pugsley,	1 50
Best heifer,		1	" John Harwick,	1 00
2d best	"	1	" Dean,	75
Best calf,			D. O. Dodge,	75
2d best	"		A. A. Copeland,	50

SAMUEL HOPPIN,
L. A. FITCH,
V. A. MOORE,
Committee.

SHEEP.

Best grade buck, 2 years old,			N. M. Pugsley,	$2 00
2d best	"		John Lyle, jr.,	1 50

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Best pen 3 lambs, H. J. Olds, ... $2 00
2d best " " W. H. Harrison, ... 1 50
Best pen 3 ewes, N. M. Pugsley, ... 2 00

WM. LYLE,
A. C. HINCKLEY,
W. H. HURLBURT,
Committee.

SWINE.

Best boar, 1 year old, L. R. Anderson, ... $2 00
2d best " 16 months old, W. H. McLane, ... 1 50
Best sow, 8 " " L. R. Anderson, ... 2 00
2d best " 8 " " E. Barnum, ... 1 50
One pen 4 pigs, dis. prem., C. G. George, ... 1 50

A. L. DOWNING,
A. PALMER,
ALLEN RICE,
Committee.

FOWLS.

Best pair geese, W. H. Harrison, ... $0 50
" ducks, " " 50
" turkeys, M. Leighty, ... 50
Best Dorkings, 1 cock and 2 hens, W. H. Harrison, ... 50
Best lot Bramas, Jason Atwell, ... 50
Best coop white Polands, J. C. Everett, ... 50

CHAS. U. CROSS,
CHAS. MORRILL,
A. C. TUTTLE,
Committee.

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One sample worsted work, Mrs. Cherry,..... $0 25
One pair lamp mats, worsted work, Miss Olive Hawley,..... 25
One embroidered ottoman cover, A. E. Gurnsey..... 25

MRS. TUTTLE,
MRS. BLACKWELL,
MRS. J. M. LONGWELL,
Committee.

CLASS V.

One What Not, leather work, ...Miss Clarissa Manley.
One box leather work,..... " "
One basket artificial fruit,..... " "
One basket wax fruit,.....Miss Ellen Dean.
One hair wreath,.....Mrs. Blackman.
Best variety of flowers,.....Mrs. A. Rice.
One shell pyramid, ...Julius J. Johnson.

MISS DEAN,
MISS FRANK SELLECK,
MRS. JOSEPH KILBURN,
Committee.

WASHTENAW COUNTY.

No report received from Washtenaw county.

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